

AMERICAN RAILROAD JOURNAL, AND ADVOCATE OF INTERNAL IMPROVEMENTS.

PUBLISHED WEEKLY, AT No. 35 WALL STREET, NEW-YORK, AT THREE DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

D. K. MINOR, EDITOR.]

SATURDAY, JUNE 13, 1835.

[VOLUME IV.—No. 23.]

CONTENTS :

Editorial Notices; Blossburg and Painted Post Railroad; New-Jersey Railroad and Transportation Company; South Carolina Canal and Railroad Company	page 353
Remarks on the Substitution of Locks for Inclined Planes	354
New Moving Power	355
American Patents; Maryland State Loan	356
Improvement in the Fire Bars of Locomotive Engines; Railroad; Quosque Tandem? A Hint to Captains and Engineers of Steamboats; Meteorological Table, &c.	357
Seabury and Young's Improved Patent Bark Mill; Crutch for a Well; Drilling Holes in Glass	358
Agriculture, &c.	359
Foreign Intelligence, Summary, Advertisements, &c.	363-368

AMERICAN RAILROAD JOURNAL.

NEW-YORK, JUNE 13, 1835.

RAILROAD LOCKS.—We publish to-day another communication from "M," upon this novel, and yet very important, subject. It does not yet seem to arrest the attention of engineers. They will not, we hope, let it pass without a word of comment.

NEW MOTIVE POWER FOR RAILROADS, is the title of an article published in this number of the Journal, from the Richmond (Va.) Compiler. It is a suggestion well worthy of attention, which it will doubtless receive in these days of experiments.

BLOSSBURG AND PAINTED POST RAILROAD.—In our columns to-day will be found the notice from the Commissioners, for opening the books for subscription to the Stock of the above Railroad. With its characteristic liberality, the Pennsylvania Legislature has guaranteed a dividend of 5 per cent. for 20 years, on the Stock of this work; and from the information contained in the report of the Engineer, Richard C. Taylor, Esq., we have not a doubt that the dividend will be much greater, as the vicinity of Blossburg abounds with an inexhaustible supply of bituminous coal, equal to the best Liverpool, and the route for the road is uncommonly feasible, running the entire distance upon the banks of the Tioga or Chemung river. Considering the unbounded market for this coal, and the outlet for an immense quantity of lumber, we think the Legislature of Pennsylvania could very safely say that the Stockholders should receive 5 per cent. interest.

NEW JERSEY RAILROAD AND TRANSPORTATION COMPANY.—The following gentlemen have been unanimously elected Directors of the New Jersey Railroad and Transportation Company for the ensuing year:

John S. Darcy,	Ashbel W. Corey,
William W. Woolsey,	George P. Molleson,
Thomas Saltes,	George L. Schuyler,
Elihu Townsend,	John P. Jackson.
Anthony Dey,	

At a subsequent meeting of the Board, the following appointments were unanimously made:

Gen. John S. Darcy, President.
Elihu Townsend, Treasurer.
John P. Jackson, Secretary.
William Pennington, Attorney and Counsellor.

A. W. Corey, Esq. having declined the situation of Superintendent, in consequence of ill health, George L. Schuyler, Esq., was unanimously appointed to succeed Mr. Corey as Superintendent.—[Newark Daily Adv.]

CHESAPEAKE & OHIO CANAL COMPANY.—We have received the seventh annual report of the Directors of this Company, which was made to the Stockholders by the President, George C. Washington, on Monday last. It is a well written paper, and presents the affairs of the company clearly and succinctly.

We gather from it that a continuous canal is now opened for navigation 110 miles from the basin, in Washington, to 8 miles above Williamsport.

The entire cost of the canal, including all expenses, is estimated at \$4,200,590.

The canal from Georgetown to Little Falls is 80 feet wide at the water line, and 7 feet deep; and to Harper's Ferry averages full 60 feet in width and 6 in depth; from that point to eight miles above Williamsport it is reduced to fifty in width and 6 in depth, and will retain the same proportions to Cumberland.

There are no obstructions on the canal to prevent the free passage of steamboats; the only permanent bridges being at an elevation of 17 feet above the water line.

There are 52 locks; and the elevation of the canal so far as completed is 353 feet.

There are 5 aqueducts, all constructed of solid masonry; and 136 culverts.

The canal is fed by five dams. They are constructed on the most approved plans, of the best materials, and give promise of great strength and durability.

Engineers are now locating the line of the canal to Cumberland.

Experiments are now being made to test the practicability of navigating the canal with steamboats. As yet nothing definite has been ascertained, but the Directors do not despair of ultimate success.

The revenue of the canal is improving, and its early completion to Cumberland, and consequent advantages to the stockholders and the state, will be looked forward to with momentous interest.—[Balt. Chronicle.]

The following statement, relative to the South-Carolina Canal and Railroad Company, has been furnished us, which we cheerfully lay before our readers.

At a meeting of the Stockholders of the South-Carolina Canal and Railroad Company held at their office, 7th of April, 1835—John Ravenel, President, in the chair—

The following Report from the Committee on Accounts was read:

Agreeably with a resolution of the Board passed on 20th March last, requesting the Committee on Accounts to report upon the debts and liabilities of the Company, and to suggest such means as they may deem proper to meet the same, and other necessary expenditures on road and machinery, the following is submitted to your consideration:

By the accompanying statement of the affairs of the Company made up to the 1st instant, the debts (exclusive of the Loan of \$100,000 from the State and interest due thereon to 3d March, 1835), amount to

\$216,533 67

It is also liable for the following work under contract and now progressing, to wit:

For 6 locomotives under construction in Liverpool, by R. Stephenson & Son, delivered on the road,	31,800 00
Do. 2 do. do. by Eason & Dotterer, Charleston,	11,500 00
Do. 8 tenders do. at the depository (a portion of materials being already provided),	1,600 00
Do. 150 burthen cars do. do.	31,000 00
Do. duplicates ordered from England,	1,940 00
Do. blacksmith shop, house for engines and cars, and additional tracks, at Hamburg,	2,000 00
Do. buildings at Aiken for engines,	900 00
Do. turnout to be constructed,	1,000 00
Do. fences, and alterations to depositories,	500 00

Making a total of \$229,773 67

The contractors of the greater part of the above enumerated machinery being bound to deliver, under penalty, your Committee believe that on the 15th October next the available power and means for business will be as follows, to wit: 22 locomotives, 400 burthen cars, 21 passage do., 7 baggage

do. This provision is estimated at equal to three freight trains of 12 to 14 cars each, and one passenger train, daily, from each end of the line, leaving 5 reserve engines; and will enable the Company to transport, annually, 149,000 bales of cotton down at \$1 per bale, and 23,440 tons of freight up at \$10 per ton; which would amount to \$533,440—passage and mail money not included.

But as the capacity (as above calculated) will probably exceed the business offering, the following is submitted as an estimate, below which we will not fall for the year to commence the 15th of October next, to wit:

60,000 bales of Cotton, at 75 cts.	
per bale, - - - - -	\$45,000 00
12,000 tons of freight up, at \$10	
per ton, - - - - -	120,000 00
Passage money, - - - - -	100,000 00
Mail money, - - - - -	10,000 00

Making the probable total receipts, - - - - - \$275,000 00

From which deduct the following expenses:

For current expenses upon the business of the road, - - - - -	\$130,000 00
Do. embankment, - - - - -	15,000 00
Do. new machinery, - - - - -	30,000 00
	175,000 00

Leaving a balance of nett profits, - - - - - \$100,000 00

if the debts were paid. In confirmation of the above estimate, we beg to bring to your view, that for the year which ended on the 1st instant, the receipts were \$183,974 07—the work having been done by an average force not exceeding 7 locomotives and 125 burthen cars, under numerous disadvantages. Notwithstanding our liability to be misled and the frequent disappointments attendant upon calculations of this kind, in the view of your Committee, an equipment so full in machinery and other means as will be ready by the 15th October, and the daily improvement of the road by the progress of the work of embankment, authorize the belief that we shall then be prepared for every probable exigency. And that the capacity, usefulness, and value of the road, are about to be fully and permanently established. With such prospects, it is deemed the true interest of the Stockholders to pay the debts of the Company—to relieve it of the numerous disadvantages of daily financial arrangements—and, without delay, to place it in a situation which will command public confidence, and give to the stock its true value. To do this, two modes have been suggested. The first is the consolidation of the debts by the issue of bonds, redeemable at eight, nine, and ten years, and bearing interest at the rate of 6 per cent. per annum, payable quarterly.

The second is, the increase of the capital stock by the sale of 3000 shares at \$100 per share, on the following terms, to wit: \$10 payable at time of subscription, 10 do. on the 30th July, 10 do. on the 20th October, and 10 do. monthly afterwards, until the whole be paid. The said shares to be entitled to any dividend that shall be made after July next: provided they shall have been paid up in full on or before the 29th of October—the Stockholders, when the books shall be opened, to have the preference for two days only. If more stock be then subscribed than three thousand shares, the whole shall be divided among the subscribing Stockholders, *pro rata*, as to the number previously held by each.

To the first, or the issue of bonds, it is objected. That it will not improve our situation, inasmuch as we shall still be in debt, and under all the disadvantages of being so: for companies, like individuals, are mistrusted or confided in, as they are understood to be indebted or otherwise. Nor would it be fair to argue from the comparatively few instances of those who have found advantage in being in debt, as they are exceptions to the general rule. If the public mind could always know the real situation of a company, its means and prospects, as well as its debts, the stock would not be liable to undue depression, and the interests of the Stockholders would not suffer; but the fact is generally otherwise, and with the idea of debt is associated the disadvantages that commonly attend it. In the case under consideration, the debts of the Company are believed to work direct injury to the Stockholders by affecting public confidence and consequently the value of the stock.

2nd. That the interest to be paid will then be taken as it now is, from the receipts of the road, and of course will continue to diminish, as it now does, the dividends. While Stockholders would be paying a higher rate of interest on the bonds, than many of them receive from their capital otherwise invested, not only transferring the advantages of a good investment to those who may lend upon said bonds, but permitting their property to remain under the depression believed now to result from its being encumbered with debt.

3rd. The improbability of obtaining here, or elsewhere, the amount necessary to accomplish our purpose at the proposed rate of interest.

The second proposition, viz. the increase of the capital stock, appears in all respects advisable. If our estimate of receipts be fair, and we believe it fully to be so, they will be equal to 84 per cent. annually on \$1,200,000, or 12,000 shares.

The present number of shares is 9,000. Your Committee, therefore, recommend the sale of 3,000 shares of additional stock, which will produce \$300,000, and pay the existing debt and contracts of the Company, as previously stated, except that to the State of \$100,000, which not being due until the 7th April, 1897, and being at the rate of 5 per cent. per annum, it is deemed inexpedient to include in the proposed provision.

JOHN RAVENEL,	} Committee on Accounts.
JOHN HAZLETT,	
GEORGE GIBSON,	
WILLIAM DAVIDSON,	

On motion of Mr. John Robinson, seconded by Mr. D. Perkins, Resolved, That the Report with its recommendations be adopted; and that the Board take measures to carry the same into effect.

Extract from the minutes.

JOHN T. ROBERTSON, Secretary.

At a meeting of the Direction of the South-Carolina Canal and Railroad Company held on 7th April, 1896,

Resolved, That the books be opened for Three Thousand Shares of additional stock to the Stockholders only on the 27th and 28th of April, and should they not take up the whole on those days, then the books to be opened to the public on the 29th instant, for subscriptions on the terms prescribed in the recommendations of the Report adopted by the Stockholders.

Extract from the minutes.

JOHN T. ROBERTSON, Secretary.

The 300,000 dollars, we are informed, have been subscribed. The old stock is

current at 109, and the new scrip at 106½: showing, conclusively, that those who have borne the heat and burthen of the undertaking, and who are, it is to be presumed, familiar with its condition and prospects, have full confidence in the success of the road.

[For the American Railroad Journal.]

Remarks on the Substitution of Locks for Inclined Planes.

In my last communication on this subject, I stated that the extra cost of constructing the locks in question was more than counterbalanced by advantages not yet enumerated. One of these is found in the circumstance, that the locomotive moves continually with the train throughout the whole route. Where inclined planes are employed, the danger and difficulty of passing the engine over them are so great, that the attempt is rarely, if ever, made. The consequence is, that at each plane the locomotive, which propels a train of cars, must be exchanged for another previously heated, so that a much greater number must be kept in immediate preparation for use than though this necessity for change did not exist.

But the principal advantage to which I alluded as overbalancing the extra expense of constructing the locks in question, is the diminution of the expense of grading, which would result from their adoption. The annual expenditure of a stationary engine being so very great, and that expenditure being nearly the same, however inconsiderable the height to be ascended, it becomes a matter of great moment that the whole elevation should be made at one point so as to require but one stationary engine. But Nature, in moulding the earth, evidently did not fashion its surface with a view to the most economical and convenient construction of inclined planes. The ascent from low to high grounds is frequently extended, either gradually or by successive partial elevations, through a distance of miles. Under these circumstances, by means of deep excavations and high embankments, the ascent is concentrated into a short space, and is then overcome at once by means of an inclined plane and stationary power. This occasions an immense cost, the greater part of which might have been avoided by the use of locks. In this case there would have been no necessity of making the whole ascent at once. It is wholly immaterial whether the locks necessary for this purpose are placed contiguous, or at the distance of miles from each other. We can, therefore, accommodate our work much more nearly to the natural surface of the ground, and thus each lock will probably save more than sufficient to defray the expense of its construction.

The recommendations of the locks in question, therefore, are: first, economy in the construction of the road by diminishing the expense of grading; secondly, economy in the operation of the road, by dispensing with stationary engines, by enabling the same locomotive to continue on

through the entire route, and also to move a greater load, since the facilities of rising perpendicularly are rendered so great that it will be practicable to lay the rails more nearly horizontal than at present. These advantages would all be felt, though no difference were made in the direction of the route in consequence of the adoption of this system, and would abundantly recommend its introduction. But these are not all. The dread of engineers for every slight elevation being overcome by dispensing with the necessity of inclined planes, it will be readily perceived that the route of a railroad may be made much more direct than at present, and thus not only the expense of constructing many miles of road, but the cost and time of transportation over it, be curtailed; and, finally, the danger to which life and property are exposed in passing over inclined planes will be almost entirely annihilated.

The only objection of any validity which I have heard urged against the locks in question is, that they have never been tried. That caution, which serves as a barrier to the introduction of visionary schemes and unsubstantial novelties, is a most useful quality; but in the present case we seek to introduce nothing new, but only the application of known powers and principles in a new method and for a new purpose. The properties of the screw and the powers of a steam engine are both well tested and understood. If, by means of the former, a few men are able to raise the largest ships, can any one doubt that the same power, properly applied, would raise a few railroad cars of one half the weight? And if human strength can effect this, will there be any scepticism as to the efficacy of a steam engine in producing the same result? There is no room for doubt; there is no possibility of a failure. But to make assurance doubly sure, let us enter into a brief mathematical estimate. The proprietor of the screw-dock in this city has informed me, that fifty men are sufficient to man all the screws at once, and that they will easily elevate a ship weighing two hundred tons a height of two feet in the space of thirty minutes. Now, the engines employed on the Liverpool and Manchester railway are of 30 horse power. What ours are in general, I know not, but let us suppose them to be of 20 horse power. One horse is generally reckoned equivalent to six men. Suppose we say five, and the power of our engine will then be equivalent to that of 100 men; but when our engine is said to be of 20 horse power, the velocity of that power is supposed to be 20 miles per hour—call it fifteen—the velocity of human power does not exceed 2 miles per hour. The effect of a given power is proportional to its velocity, so that the power of 100 men, provided it moves at the rate of 15 miles per hour, is the same as that of 750 men moving only two miles per hour. The effective power of our steam engine is, therefore, 15 times as great as that employed in raising ships on the screw-dock. But the weight we shall wish to elevate will never exceed 100 tons, or one half

the weight of a large ship. The proportion between our power and weight is, therefore, 30 times as great as in the case of the screw-dock. If, therefore, in the latter case, they can raise their weight 10 feet in 30 minutes, we shall be able to raise ours the same height in 1 minute, or 30 feet in 3 minutes. M.

(From the Richmond Compiler.)

NEW MOVING POWER.—The article below from Mr. James Herron, civil engineer, upon the subject of a new propelling power upon railroads, is one which deserves, and will unquestionably receive, the calm and dispassionate consideration, not only of scientific men, but of all who feel an interest in the advancement of science. The friends of Internal Improvement should give it their most patient attention. Its novelty may startle them, but what great suggestion in any age did not at first excite doubt of its feasibility? Witness the fate of Fulton and Oliver Evans. They were deemed insane and visionary in their day, but they are now ranked amongst the wisest men of our country, and the sigh of regret often escapes at the ingratitude and dullness of their countrymen.

Mr. Herron may expect to combat with incredulity, ignorance, and personal rivalry; but still he will find intelligent men disposed to consider with an impartial disposition the merits of his scheme. We pretend to but little science, but we confess we are struck with the feasibility of his plan. We think it deserves examination, and we are glad to find that an engineer, high in the estimation of the public, not only gives Mr. Herron's views a fair and liberal consideration, but seems disposed to concur in the principles upon which they are based.

In this era of improvement, every man who can make even the slightest addition to the cause of science, should be encouraged to the fullest exertion of his faculties for the public weal.

Hydrodynamic Railway, or the Application of the Power of Rivers to the Rapid and Cheap Transportation of Produce and Merchandise.

It has long been with me a matter of doubt, whether the water used in the lockage of canals was not in many cases an injudicious application of a valuable power, as in the case of a canal located along the valley of a great river having considerable fall in its bed, like that of the river James, which has 1222 feet fall from Covington to tide water, or about 4.74 feet per mile, rendering at least one lock necessary for every two miles in the average.

On investigating the subject, I find that the water power of the river is of itself equal to the transportation of a greater quantity of tonnage than can be passed through the largest canal, and this too with the astonishing rapidity peculiar to railroads.

I will therefore lay before you, in as succinct a manner as possible, this new though simple deduction of science.

The locks of the Chesapeake and Ohio Canal are 100 feet long, 15 wide, and, say we take one of the most approved lift, 8 feet, the "prism of lift" will then contain 12,000 cubic feet of water, which will weigh 750,000 pounds. Every time the lock is emptied, this quantity is transferred from a superior to an inferior level. If the valves are opened simultaneously, I am informed that the lock can be filled and

emptied in little more than two minutes; but say that it takes three. Now, this water is power, and if it were applied to a properly constructed "breast wheel," or where the fall of water is greater, to a "pitchback," we should have four-fifths of it available to set any machinery we think proper in motion. Let it be applied to an endless chain or rope, passing over suitable rollers along the line of a railway, after the manner of the stationary system of steam engines, we shall have a water power railway, entirely free from the objections that can fairly be urged to the stationary steam engines, of the necessity of keeping up the fire and steam, &c.

When the stations are two and a half miles apart, one twentieth of the power, according to Tredgold, will be expended in moving the chains; but I will allow a tenth of the power to effect this object on two mile stations, the chain being worked but for one mile.

We have then the four-fifths of 750,000 pounds, (the one-fifth being lost in the application to the water wheels) equal, 600,000 pounds, which, falling 8 feet in three minutes, is equal to 1818 pounds moved half a mile in the same time; which is at the rate of 10 miles an hour. Deducting from this the one-tenth, as that part lost in moving the chain, leaves 1637 pounds. And as 10 pounds are equal to the transportation of a ton, with the commonest railway wagons, it follows that the above power is equal to the transportation of 163.7 tons over half a mile of the road, while a boat would be passing through the lock of the canal; or it will transport 81.8 tons over a mile of the road in the same time, which is at the rate of twenty miles an hour!

But the maximum rate of transportation on canals is 2½ miles an hour, and as the mass moved is inversely to the velocity, we shall at this rate be able to transport 654 tons.

The water used would be at the rate of 66.6 feet per second. James river, even at Covington, in a dry season, yielded nearly three times this quantity, as appears from the Report* of Mr. Crozet, who measured Jackson's river and Dunlop's creek in August and September, 1826. The mean of the results obtained by this engineer is 177.6 cubic feet per second, or 10,656 feet per minute; and we have this quantity with 7.11 feet fall per mile, the average down to Pattonsburg; before reaching which, however, the volume of water is more than doubled; and as we descend the river, although we have less fall per mile, we have at least six times the quantity of water to compensate for it; and the fall is still about 3½ feet per mile.

The heavier trade being descending, will add to the effect of this power; but disregarding this favorable circumstance, omitting the decimals in the fall per mile, and taking the minimum quantity, we have 10,656 cubic feet of water, equal in weight to 666,000 pounds, which, if permitted, will of course fall the 7 feet in a minute, and is therefore equal to 4,662,000 pounds falling one foot. Deducting one-fifth for loss in application, leaves 3,729,600 pounds. Now the load we can transport will depend on the velocity at which we would travel—say that it shall be 10 miles an hour, which is 880 feet per minute.

Dividing 3,729,600 by 880, the quotient is 4,238 pounds, moving with the velocity of 10 miles an hour!

From 4,238 deduct the one-tenth part, for

* 5 Vol. Board of Public Works, page 109.

that lost on mile stations, in moving the chain, or rope; and dividing the remainder by 10 for the friction per ton of the carriages, and we have 381.5 tons transported at the rapid rate of 10 miles an hour!

And as each and every mile furnishes its own moving power, it follows that it is equivalent to keeping this quantity in motion on each mile throughout the line at the same time. And as the distance from Richmond to Covington is 257½ miles, this may amount to the enormous quantity of 98,236 tons; or to the transit and delivery of 3,815 tons hourly!

Having thus demonstrated the amplitude of this moving power, to an extent probably far beyond any demand we shall be able to make on it—which will be better understood by the general reader from the fact, that but 17 hours would be equal to the transportation of a greater quantity of tonnage than passed over the whole Baltimore and Ohio Railroad in a year, ending 30th September, 1833—it now remains to show that it can be employed at a reasonable expense.

The expense of erecting works for hydrodynamic transportation will depend on their scale, or magnitude, and on the greater or less permanent character of the materials used in their construction; also, on the extent to which we would employ the motive power. With regard to the latter, however, it should be observed, that we obtain it so cheaply, and in such excess, as to obviate, to a great extent, the necessity of expensive grading. This adaption of fixed power to an undulating surface, of any degree of slope, renders it peculiarly applicable to mountain localities, as by its means we can cross the bends of the river, thus shortening the distance, while a canal, or even an ordinary railroad for locomotives, should be conducted round them.

Another important advantage derived from the employment of this cheap power, is that we can substitute, for the iron rail, a broad granite tramway, similar to that extending from London to the West India Docks; which, although it will cost more per mile in the first instance, yet it will have great permanency to compensate for this. But the most important advantage to be derived from the granite tramway, is, that any man may bring his own farm-wagon, and, leaving his horses behind him, be drawn to market at a rate of 10 or 20 miles an hour, which would be in less time than would be spent in passing the locks of a canal: thus freeing the work entirely from the odious charge of monopoly brought against railroads.

To form an estimate of the cost, it will be necessary to suppose the works adapted to some definite amount of trade. Say that it shall be to the delivery of 100 tons per hour, or to the transportation of 50 tons at a time, at the rate of 10 miles an hour.

For this purpose I will suppose it necessary to erect a dam at every four miles; and that they may be built in the most substantial manner of stone masonry, I will estimate them at \$10,000 each; the average width of the river up to the Blue Ridge is 699 feet; above the Ridge, it will only be 275 feet. For water wheels of the best and most durable construction, say \$3000.

Thus we have 13,000, which, divided by 4 miles, gives \$3250 per mile, as the cost of the moving power.

Estimate of the expense.

Motive power, or proportional cost of	
dams per mile,	\$3,250
Ropes, a double line per mile,	1,800
Rope rollers, put up,	850

*A broad granite, or marble tramway, double track, -	8,000
Grading and bridging per mile, say	2,000
	\$15,900
Add 10 per ct. for superintendence,	1,590
	\$17,490

High and unfavorable as the above estimate is, yet the whole cost of the moving power, including dams, water wheels, ropes, and rollers, will be much less per mile than such locks as those of the Chesapeake and Ohio Canal, which cost, as I am credibly informed, \$1500 the foot lift.

I have estimated for ropes, as they are in more general use than chains; and the above will be the cost of the newly invented rope, saturated with India rubber, expressly for this purpose; which is said to increase its strength as well as its durability.

When the stations or water wheels are placed 4 miles apart, each wheel would have to work 2 miles of the road at a time; but did the trade require it, double, or probably treble the foregoing tonnage could be delivered by erecting an additional water wheel at each station.

The following is the estimate of the amount of power to work the 4 mile stations, which those conversant with the subject will perceive to be very ample.

Friction and resistance of two miles of rope, -	600 lbs.
Ordinary friction of 50 tons of carriages and goods, 10 lbs. -	500 do.
Allowance for occasional gravity, at 20 lbs. per ton, -	1000 do.

Power allowed at the rate of ten miles an hour, - - - 2100

2100 pounds moved 880 feet in a minute, is equal to 1,848,000 pounds moved 1 foot; which is equal to 154,000 pounds falling 12 feet in the same time, which is, also, equal in weight to 2464 cubic feet of water. To which add one-fourth, for loss in application, and we have 3080 feet per minute, or rather more than 51 feet per second.

For the sake of conveying an idea of the probable cost on a large scale, I have supposed isolated dams to be used at regular distances, but the engineer will of course adapt his works to suit particular localities, sometimes preferring a continuous canal, substituting water-wheels in place of locks, and thus discharging the water, as it is used, into the next consecutive reach below. Or where great length of level occurs, the wheels may be made to discharge their water into the river, to be again taken out of the next dam.

On canals already constructed, where they have considerable lockage, and plenty of water, it is obvious that the trackage may be effected by the foregoing means; that is, by erecting a water-wheel along side of a lock, and extending a chain down the margin of the canal on the one side, which would be returned up the other.

And as they no longer need the tow-path, they may lay a light rail track, on which passenger cars may be drawn by the same power at any required velocity.

But in many cases, where they have not a superfluity of water, they had better substitute water wheels for their lock gates, widen their tow-path, and lay down a railway.

In conclusion, I invite investigation by

* Wood and iron rail tracks, like those on the Petersburg Railroad, could be laid in a double track for 6000 dollars a mile. They would last much longer than when locomotives are used.

men of science, as it is certainly a subject of great importance to the country, now so extensively engaged in works of internal improvement.

JAS. HERRON,
Civil Engineer.

Richmond, Va., May 26, 1835.

AMERICAN PATENTS.—For an improvement in *Axles and Boxes for Railroad Cars*; Dexter C. Force, and Frederick Davis, city of Baltimore, November 6. The axle is to be turned and made true in the usual way, and upon it is to be placed a metal ferule, or tube, fitting it exactly. The wear from running is to be between the ferule and the box contained in the hub of the wheel, so that no wear whatever shall take place on the axle itself. The material of which the ferule, or tube, is to be made, is not particularized, but it is said that it may be "either of composition, or of iron made case-hardened." There is no claim, but it is sufficiently plain that the patent is taken for the using of the ferule, or tube, between the axle and the box.

For *Thorough Braces for Carriages and Railroad Cars*; Frederick Davis, city of Baltimore, Maryland, November 6. These thorough braces are to be made of wood or of iron, although the latter appears to be preferred; it is to be of the kind called band iron. The brace is to extend along under the lower side timbers of the carriage, like those of leather, and is to have one or two hinge joints near its middle, where the body is to be attached to it. To strain, or take up the brace, there may be shackles at the ends, where it is attached to the jacks, furnished with a tightening screw and nut. Sometimes the brace is made double at each end, a piece, forming a strap, being attached to each jack; these pieces, and the ends of the braces, have rows of holes, through which bolts may pass, and by sliding these upon each other, the bolts may be passed through different holes, and the length of the brace be thereby regulated. "The improvements to which I lay claim as original, are the forming the entire brace of iron, other metal, or wood, in the peculiar manner I have described, so jointed and attached to the body as that it may be free to act on it without obstruction, when jolted or put in motion by the roughness of the road; and also the application of it to all descriptions of carriages or railroad cars, where thorough braces are required; also the application of the screw and the fixtures described to carriages where body loops are used, so as to raise and lower a body at pleasure, and to give a pleasant motion to the vehicle, without the use of the leather braces heretofore employed."

[From the Baltimore American.]

The Maryland State Loan of two millions, to bear an interest of six per cent. and to be irredeemable for thirty-five years, has been taken by Messrs. J. I. Cohen, Jr. and Brothers, of this city. The money is to be applied to the completion of the Chesapeake and Ohio Canal to Cumberland.

A Loan of a million of dollars, to bear the same interest and to run for the same period, is also required by the State for the completion of the Susquehanna Railroad to York. Offers will be received by the Treasurer at Annapolis until July 15.

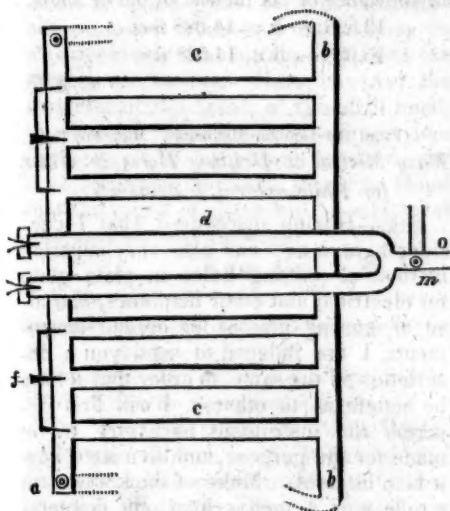
On the subject of the two millions Loan, we find the following paragraph in the Annapolis Republican of Saturday.

The Maryland State Loan, of two millions of dollars, for which we have had some of the large dealers in stock in competition, such as Messrs. Biddle, Chauncey, Moss, Cohens, &c. was finally taken yesterday by the Messrs. Cohens, of Baltimore, at a small advance upon the limit.—The terms will depend upon whether Bonds or Certificates be issued, which the Treasurer reserves the right to decide.

[From the London Mechanics' Magazine.]

Improvement in the Fire Bars of Locomotive Engines.

SIR.—The Rev. Dr. Lardner, in his evidence given before the Select Committee, says, "that he has witnessed a new set of grate bars melted in a single trip between Manchester and Liverpool." From this I conclude that the fire bars of locomotive engines are generally red hot; and supposing this conclusion to be correct, it strikes me that the red hot bars may be rendered of use to the engine—first, by increasing the energy of the fire, should the steam flag on the ascent of long hills, or in going over heavy roads; and, second, by producing a brilliant light, when locomotives undertake night journeys. Both these objects I propose to effect, by using hollow fire bars, and making them serve as so many small oil-gas retorts; or at other times permitting the air to pass through them to the furnace.



Suppose the front bar *a*, and back bar of the grate *b*, hollow, and of larger dimensions than the hollow fire bars *c c c*, all which open into them, except the two centre bars *d d*, which pass through both. In the front bar *a*, just opposite each fire bar, are entered jet points *f*, connected with a small forcing pump, with which the attendant may alternately inject oil into the bars on the right and left of the centre; which oil being converted into gas will pass into the bar *b*, from each end of which a pipe should pass upwards to the side or front of the furnace, as the form of the boiler may render most advisable. Previously to injecting the oil, the valves *e*, in the bar *a*, should be screwed down to prevent the air from entering. A pipe from each end of *a* should be carried down, and then to the forepart of the carriage, and end in a funnel.

To supply the gas for lighting the carriage, let the two centre bars, after passing through the back bar *b*, be united. There may be placed at *m* a three-way cock, to allow the passage of the air through the pipes by day, when the jet caps are unscrewed; and a communication may be opened by the pipe *o*, (which should pass through the cold water supply tank,) with the gas holder, during the night, the oil to be injected into the bars, *d d*, alternately by the engine.

I remain, sir, yours respectfully,

J. R. WHITE.

Wells, Somerset, Feb. 24, 1835.

P. S.—Has not Colonel Macerone given us a pretty good hint of the manner in which Dr. Church effects his condensation? There must certainly be some strong resemblance

between Mr. Hall's mode and Dr. Church's. Since speaking of one leads to mentioning the other, why not place Hall's fascine of condensing tube horizontally, and supply the place of water with an air draught or blast to the furnace, thus warming the air and condensing the steam? J. R. W.

RAILROAD.—We understand that the locomotive engine performed the journey yesterday from Boston to Lowell in one hour and seventeen minutes. The engine used on this occasion is an imported one, of large size, intended for the baggage train, and not for the passenger cars. There are some half dozen engines now building at the machine shop, (some nearly done,) which are intended to do the thing in less than one hour each way.

The completion of this magnificent improvement, (which, for solidity and permanence of construction, is not surpassed,) is a matter of universal congratulation. The future progress and prosperity of this town are placed as far out of the reach of all evil contingencies as any thing merely human can be. We can now fairly claim the advantageous distinction, that no inland town in the United States, (not a port of entry like Cincinnati or Albany,) is in possession of so many local advantages, or so many of the materials and means of expansive growth, and progressive advancement in business, wealth, and population, as the town of Lowell.—[Lowell Courier.]

QUOSQUE TANDEM?—To what lengths shall we go, where shall we stop—not in conspiracies, but in steamboat improvements? Heretofore the North River boats, which perform the distance of 150 miles, between this city and Albany, in from eleven to twelve hours, have been considered paragons. A new competitor however, the *Lexington*, is afloat which does some two hundred and ten miles in twelve hours! We take the annexed account of this boat, and her wonderful performance, from the Journal of Commerce.

The *Lexington* made her passage to Providence in twelve hours and twenty-eight minutes, after deducting eight minutes for stops, and her passage back from Providence to opposite the Dry Dock, in this city, was performed within twelve hours. For a part of the way her speed was twenty miles an hour. The distance from New York to Providence is called two hundred and ten miles. The construction of the *Lexington* is in several respects novel, and as she acquires her superiority from these novelties, they will be interesting to all persons engaged in the building of vessels. She is 208 feet long, has 22 feet beam, and 11 1-2 feet hold. She is timbered in a manner to give the greatest degree of strength, and is put together with the utmost accuracy and niceness of workmanship. But that which enables her to endure, on so long a line, the immense pressure which bears upon the stem and stern while she is forced through the water at so rapid a rate, is that the deck is an arch, thus bringing the pressure against the ends of the timbers and planks, instead of against their sides. The stroke of the piston is 11 feet, the diameter of the water wheels 24 feet, and the revolutions 21 to 23 a minute. The boiler and the weight of machinery, as far as possible, is placed in the hold. Some of the passengers breakfasted in Boston yesterday morning. The *Lexington* was built by Bishop & Simonson under the direction of Capt. Cornelius Vanderbilt, her owner. Her construction exhibits great knowledge of mechanical principles, and a peculiarly bold and independent genius. We ought to add, that notwithstanding her great speed, there are no wood-piles necessary on deck, and the expense of fuel is not more than half so great as in an ordinary boat. The speed with which she came down from Providence would carry her to New Orleans in four days.

[FOR THE NEW YORK AMERICAN.]

A HINT TO CAPTAINS AND ENGINEERS OF STEAM BOATS.—Water will boil away very fast at a sudden change of the weather, and more so just before a rain. This circumstance may be one of the causes of the Steamboat boiler bursting so frequently. If water boils away fast, steam must be generated fast,—the boiler also will lose water faster than the pump is able to supply it, and the decreasing quantity of water in it, being acted upon by the usual heat, may produce steam too fast for the strength of the boiler at such particular periods.

The fact that water, before rain, boils away much faster than usual, almost every cook and housewife knows perfectly well, and as it does so in a teakettle, it must do the same in a steam boiler, and consequently will produce at such times, effects not before calculated upon.

The thermometer rises and falls frequently, twenty or more degrees during a few moments; at such a time it is probable that steam is made faster than usual, and precaution should be used. In England where the changes of the weather are neither so great nor sudden, the bursting of the boiler is a rare occurrence. R.

NEW AND VALUABLE DISCOVERY.—An extensive Marble Quarry has just been discovered in this town, which, from present appearances, bids fair to rival the richest Quarries of Italy. Two specimens have been shown us, the one in a rough state, the other having undergone the operations of the chisel. Though unable to declare its peculiar species, yet in the fineness of its grain, and the brilliancy and regularity of its variegated colors, it far exceeds the celebrated Italian black and gold marble. The piece now before us combines the various colors of green, black, purple, flesh-color, exhibited in various shades, and the whole interspersed with a fair white, running in different directions, like the traces of a water course on an elegantly executed painting. A specimen is now in the hands of a gentleman of this place who has worked many years in the marble business; he has tried it, and pronounces it far superior to any European marble he ever worked.—[North River Times, Haverstraw.]

METEOROLOGICAL RECORD,

For the month of April, 1835—kept at Avoylle Ferry, Red River, Lou. (Lat. 31° 10' N., Long. 91° 59' W.) by P. G. VOORHIES. [Communicated for the American Railroad Journal.]

Days.	Morn.	Noon.	Night.	Wind.	Weather.	Remarks.
1	60	71	69	calm	cloudy	Red river rising
2	60	76	71	s. light	..	..
3	61	75	68	calm	clear	..
4	54	74	68	NE	..	smoky, pine woods on fire
5	44	67	61	calm	..	..
6	43	66	56	NE	..	foggy morning—day clear
7	44	68	61	NW. light	..	..
8	45	72	72	calm	..	smoky
9	50	65	60	..	cloudy	—rain at night
10	50	72	66	..	clear	foggy morning—clear day
11	60	77	68	s. high	..	all day —river at a stand
12	66	73	70	s. light	cloudy	shower in the morning
13	56	68	63	NE	..	all day—river falling
14	57	61	56	N	..	..
15	52	58	50	NE	..	rain and showers all day
16	46	66	60	calm	clear	..
17	44	70	64	SE	..	..
18	60	61	63	..	cloudy	rain all day
19	71	71	69	s. high	..	drizzling all day
20	66	71	65	calm	..	..
21	56	72	64	..	..	..
22	58	72	72	..	..	..
23	54	80	74	..	..	foggy morning
24	62	72	70	..	..	clear at noon
25	70	72	67	SE	..	thunder and rain all day
26	64	72	70	calm	..	..
27	64	70	66	N	clear	Red river rising
28	50	72	68	calm	..	..
29	58	68	70	sw	cloudy	rain and thunder all day
30	70	76	72	calm	clear	.. in evening

Red river rose this month, 1 foot 3 inches, and is below high water mark, 6 feet 2 inches.

[From the "Mechanics" Magazine and Register of Inventions and Improvements.]

SEABURY AND YOUNG'S IMPROVED PATENT BARK MILL.

We have received, from Messrs. Seabury and Young a drawing and concise description of their Bark Mill, to which we referred on the cover of the April number. They furnished us with drawings of the different parts, two only of which we have had engraved: one, a cross section, showing the interior of the mill; and the other the apparatus for cracking the bark as it passes in, to the mill.

We have never seen one of them in operation, but are induced to believe that it will be found a first rate machine, not only for the purpose for which it is designed, but also, if made a little finer, for grinding apples, and for breaking corn on the cob for cattle, or preparatory to its being ground into meal.

One of the mills, addressed to Gibert & Son, New-Haven, was some time since left in front of our office, and has attracted much attention, but we are unable to answer the numerous questions put relative to its cost, &c. and would suggest to the patentees the propriety of furnishing the necessary information.

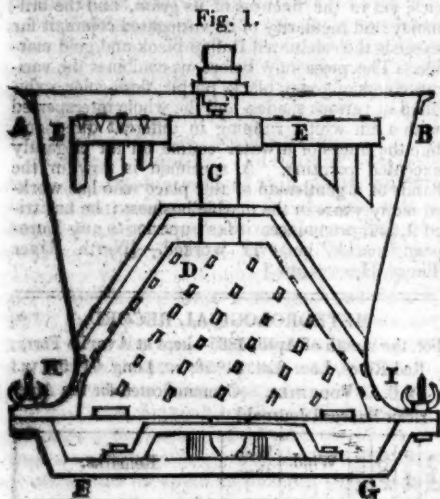


Fig. 2.

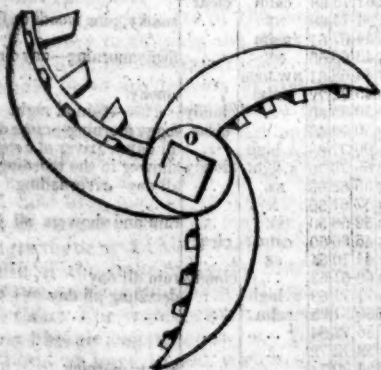


Fig. 1 represents a cross section of the mill when in position for use. A B, the pot; D, the nut or cone, with numerous projections on its surface, which revolves within the pot; C, the upright shaft by which the mill is put in motion; E F, revolving arms or breakers, with teeth pro-

jecting both upwards and downwards, which crack the bark as it passes into the mill; F G, the regulating beam, which is operated upon by the screws, H I, and raises or lowers the revolving cone, as the bark requires to be finer or coarser.

Fig. 2 represents the revolving arms as seen in Fig. 1, E F, attached to the upright shaft C, which passes through the mortice O. The object of these arms is to prepare the bark for the mill.

The following is one of the numerous favorable letters from one who has used the mill; and of Mr. Williams, we can speak as a competent and judicious judge of its merits.—[E. M. M.]

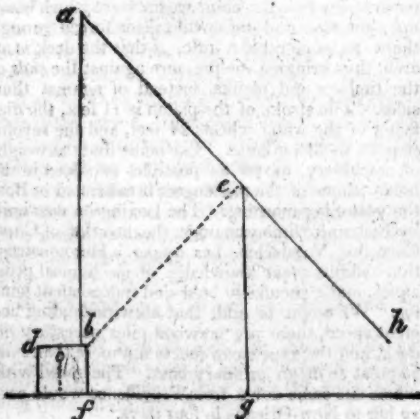
Messrs. Seabury & Young:

GENTLEMEN,—The bark mill I purchased of you I have had in operation about five weeks. I am highly pleased with it, and prefer it in my establishment to any one I have ever used. As an experiment, I have ground half a cord of bark in twenty-eight minutes, (forty-five revolutions,) and ground it well. I can cheerfully recommend it to the public, as a valuable improvement. Should you consider the above of any service to you to present to the public, you are at liberty to publish it. THOMAS WILLIAMS.

Vernon, Nov. 30.

To find the Length of the Sweep and Crutch for a Well—the Depth of the Well given.

Rule—The square root of half the square of the depth of the well, with the height of the curb added, is equal to the distance from back side of curb to centre of pin on which the sweep hangs; and the square root of half the space of that distance, with half the width of the curb added, is equal to the distance the crutch should be from the well, and the height of curb added gives the height of the crutch from the ground, consequently the length of the sweep will be twice the distance from the curb to centre of pin, less one foot. But to make it work easy, there should be an allowance of about six inches in height, and in the distance from the well, that is, the pin 6 inches lower, and 6 inches further from the well, which will give about one foot more on upper end of sweep, which allowance is in consequence of the upper end of the sweep being smaller.



$$\text{Thus—}\sqrt{a b^2 \div 2} = b e$$

$$\sqrt{b e^2 \div 2} + c b = g f$$

$$\sqrt{b e^2 \div 2} + f b = g e$$

$$\text{Then, } 2 b e = a h.$$

Examples—I have a well 21 feet deep, and the curb around it 3 feet high, and 3 feet square—required to know the length of the sweep, height of crutch above the ground, and how far I must set the crutch from centre of the well.

$$21 + 3 = \sqrt{24^2 \div 2} = 17 \text{ feet, distance } b e \text{ from curb to pin.}$$

$$\sqrt{17^2 \div 2} + 1.5 = 13.528 \text{ feet, distance from well.}$$

$$\sqrt{17^2 \div 2} + 3 = 15.028 \text{ feet, height of the crutch.}$$

$$\text{And } 17 \times 2 - 1 = 33 \text{ feet, length of sweep.}$$

Then, as was stated above, we will make an allowance of six inches, or 0.5 of a foot,

$$13.528 + .5 = 14.028 \text{ feet.}$$

$$15.028 - .5 = 14.528 \text{ feet.}$$

S. A.

[From the London Mechanics' Magazine.]

Easy Method of Drilling Holes in Glass for Philosophical Instruments.

SIR,—Having discovered what I consider to be a new and also very superior method of cutting holes in plate glass for electrical and other machines, and also of cutting glasses for optical instruments, I am induced to send you a description of the same, in order that it may be beneficial to others. I will first describe the instrument necessary to be made for the purpose, and then state how it is to be used. Make of thick sheet tin a tube 3 or 4 inches long, the diameter of which, measuring from the outside edge, must be somewhat smaller than that of the hole required. Let this tube be converted into a drill, thus:



A is the tube; B the head of the drill, turned out of the wood, part whereof goes about an inch into the tube; C is a piece of iron wire for the pivot. The open end of the drill should have a few notches made in it with a file, so as to admit the emery, necessary to work with facility.

Determine the size of the hole you want, say half an inch in diameter; then cut such a hole in a piece of flat wood, being not less than 2 inches square, and half an inch thick. Next, mark on the plate glass the situation of the hole wanted; take some melted beeswax, with, or without rosin, and fix the piece of wood on the glass, having the hole exactly over the place previously marked; place the glass on something flat, whereon some baize or carpet has been first laid, to prevent the glass from sliding during the process; mix plenty of grain emery with water, and put it into the open part of the drill; now place the drill in the hole of the wood, and with a breast-plate and drill bow, about 2 feet long, commence drilling. You must work at first very slowly to avoid chipping the edge of the

glass, and afterwards proceed at a quicker rate, always taking care not to press on the drill more than sufficient to keep it steadily working, for otherwise there will be great danger of breaking the glass. When the drill is almost through the glass (which may be ascertained by looking at the other side of it), you must remove the carpet or baize, above alluded to, to obviate the danger of chipping the edge of the hole, and then proceed very slowly until the operation is quite finished. You will thus obtain a clean edged circular hole, with a corresponding piece of glass, and this without incurring the least risk of breaking. In this way a piece of plate glass, a quarter of an inch thick, may be cut through in less than ten minutes.

I have adopted this mode of cutting holes in plate glass for electrical machines, and it is obvious that it may be also applied to the cutting of glasses for optical instruments. Here, however, the diameter of the inside of the drill must, to allow for friction, be a trifle larger than the diameter of the glasses required; for if no allowance be made, it will be found that the piece of glass will be somewhat smaller than was required.

I am, &c. F. H.

Bath, Dec. 29, 1834.

AGRICULTURE, &c.

[From the Horticultural Register.]

ON THE CULTURE OF MILK-WEED, (*Asclepias Syriaca*).—Some four or five years since, in a conversation with George Manners, Esq. the British Consul for Massachusetts, on the various kinds of edible vegetables, cultivated in our gardens, he observed that, during a recent visit to Canada, he was informed that the young shoots of the milk-weed were used as a substitute for asparagus, and asked me if I had ever heard of their being cooked in the United States. I replied, that I perfectly recollected, when a boy, my mother often had them gathered from the fields and road-sides, with the dandelion, shepherds' sprouts, nettles, and other plants, which were collected as greens; but that I had never seen the plant thus used elsewhere, or heard it named as a culinary vegetable; but that I certainly would make an experiment in its cultivation, and as to its qualities, as an addition to our garden pot-herbs.

Having collected the seed in the autumn, it was sown early in the spring in drills, and covered an inch deep. They came up freely in four or five weeks, and when the plants were two years old, I took up a portion of the roots, and set them out about eight inches apart, in a trench six inches deep. The ground had been manured and thoroughly dug over, previously to forming the trench. The following spring, when the shoots were four or five inches high, they were cut, tied up in bunches, boiled and served up with melted butter, like asparagus; and they were as tender, and to my taste quite as delicious a vegetable, resembling in flavor the youngest and most delicate string beans.

As the plant is very hardy, exceedingly

prolific, easily cultivated, and such a valuable addition to our early vegetables, I consider a bed of it nearly as desirable as one of asparagus.

No better mode of cultivation can be adopted, than that for asparagus, as described by Mr. Chandler, in his interesting, instructive, and able article, which appeared in the third number of the Horticultural Register,—except the roots of the milk-weed should not be covered more than five or six inches deep.

Mr. Chandler is entitled to the gratitude of his fellow citizens for the valuable result of his experiments; and I freely declare that the mode he adopted and recommends, is the very best which I have ever seen published. I can confirm it, by having followed a similar process, but by no means so perfect in all its parts as that which he has so successfully tested. As a practical, intelligent, zealous, and enterprising tiller of the earth, he has no superior in this State; and the commendable gentlemen who have established a Farm School on Thompson's Island, could not have made a better selection in a superintendent of the art of cultivation in all its branches.

Asclepias (*Swallow-wort*), is a numerous genus of plants, there being forty-two species, which have been described by botanists, two of which only are found in Europe, but three in South America, while there are eighteen indigenous to the United States, and the others are divided between the West Indies and Africa. Many of the varieties are cultivated as ornamental plants in England and France, but the following kinds, natives of this country, are considered the most beautiful, besides being more hardy than those of more southern climes; still many of the latter are considered worthy of the green-house.

1. *Muschata*, so called by Bartram, for its strong and agreeable musk scent, is peculiar to the natural meadows of South Carolina, Georgia, and Florida. It is a low plant, of not more than five or six inches in height, with flowers of a pale green color, inclining to yellow.

2. *Venosa*, has leaves elegantly variegated with white and crimson veins, and the stems terminate in an umbel of pale flesh-colored flowers.

3. *Pulchra*, — Water-silk-weed, — has nearly erect stems, four or five feet high; umbels very small; flowers crimson purple. Grows on low, wet land, by the side of ponds.

4. *Variegata*, — Variegated. Leaves rough, umbels compact and come out from the side of the stalk; flowers of an herbaceous odor.

5. *Nivea*, — White, or Almond-leaved. Stalks two feet high, and of a dark green. Leaves deep green above, and pale beneath, smooth and rather stiff. Flowers green, with white nectaries.

6. *Incarnata*, — Flesh-colored, — has several upright stalks about two feet high, at the top of which are produced close umbels of purple flowers. Blooms in August.

7. *Decumbens*, — The stalks are declining, hairy, a foot and a half high; leaves narrow, umbels compact, at the extremity

of the branches; flowers a bright orange color.

8. *Verticillata*. Stalks slender, upright; umbels at the extremity of the stems; leaves in whorls of four, five, and six together; flowers small and of a greenish white color. Found in Roxbury and Dedham; blooms in July.

9. *Tuberosa*, — Butterfly-weed. Root large, fleshy, branching, and somewhat fusiform, but it is only by comparison with other species that it can be called tuberos; stems numerous, growing in bunches from the root, hairy and dusky red; flowers numerous, erect, and of a beautiful bright orange color; grows in Woburn and Newton; blooms in August.

10. *Obtusifolia*, — Blunt-leaved. Stems erect, supporting a terminal umbel, at a distance from the leaves, which are opposite, ovate, heart shaped at the base; flowers large, of a greenish white, tinged with red; it is found in Cambridge and Mount Auburn; blooms in July.

11. *Phytolocoides*, — Poke-leaved. A tall, large flowering species, of a delicate appearance; stem erect, four or five feet high; leaves large; umbels nodding, flowers large, petals green, nectaries white or flesh colored; grows in low grounds; blooms in June.

12. *Purpurescens*, — Dark-flowered. Stem erect; flowers of a dark crimson purple; grows in Cambridge and Newton, but is rare.

13. *Quadrifolia*, — Four-leaved. A delicate species, growing in dry woods; stems about a foot high; flowers flesh colored; is found in Roxbury and Brookline, and blooms in June.

14. *Viridifolia*, — Green flowered. An inelegant species, with small greenish umbels; is found in Leicester; blooms in July.

For the description of the third and sixth preceding species, I am indebted to Dr. Bigelow's excellent work, on the plants in the environs of Boston. There is a beautiful colored engraving of No. 9, and a more particular account of it, in his other most able and splendid publication, called Medical Botany.

15. *Amoena*, — Oval-leaved. Stalks from a foot and a half to three feet high; at each joint are two large leaves, which are blunt, thickish, stiff, smooth, with purple nerves; umbels rise from the top of the stalk and some of the upper axils; flowers of a bright purple color.

16. *Rubra*, — Red-flowered. Stem upright; umbels many, from the same common peduncle; a native of Virginia.

17. *Parniflora*, — Small-flowered. A native of South Carolina and Florida.

18. *Syriaca*, — Milk-weed, or Silk-weed. This species abounds all over our country, and for the many useful purposes to which it may be applied is deserving of special attention. The root is perennial, and in April or May throws out, like asparagus and hops, a great number of shoots; the stems rise to six or seven feet in height in a rich soil. When the leaves or stems are broken off, a milky substance, of a viscid consistence, exudes, from whence the plant derives one of its most general trivial names. The flowers appear in July, and

are in umbels of from twelve to sixteen on one stem, each containing thirty or forty single flowers, which adhere to the umbel by a long slender stalk, and has a sweetish odor. Each bunch of flowers is succeeded by three, four, and sometimes ten long, flat, and rough pods, which enclose numerous round, flat, thin, yellowish brown seeds, wrapped up in a beautiful shining white and soft kind of silk, which constitutes their wings, and by means of which they are conveyed with ease to a great distance by the wind; it has also given rise to the other trivial name, by which the plant is known in some parts of the country.

The great utility of the *Syriaca* or milk-weed in the arts has not been understood but since the middle of the last century, although it was introduced into Europe at a much earlier period.

A manufactory of articles from the silk was established in Paris in 1760, and it has long been employed at Lausanne, with advantage, as candle-wicks. Mr. Schneider of Liegnitz, has been distinguished for the zeal he has evinced in relation to the cultivation and preparation of this article, and has recommended it in two different pamphlets.

In the application of it to paper-making, Mr. Schmid, of Lunenburg, made a variety of very interesting and instructive experiments.

The cultivation of the plant has been found very easy. Mr. Schneider began in 1785, with but six plants, and in 1793 he had a plantation of 30,000, which yielded him 800 pounds of silk the first crop, 355 the second, and 600 the third. They were planted in rows about two feet apart, with a sufficient distance between the roots in each row. The silk was separated into two parts, the longer being used for spinning, and the shorter for hat making and beds.

Mr. Schmid, who was an ingenious manufacturer of paper, made several experiments with the capsules, or pods, which gave the following results:

1. From the interior white rind of the pods he obtained writing paper, pretty white, of good quality, and similar to the silk paper of the Chinese.

2. From the external green part of the pods, a greenish colored paper was made, which, when sized, was stronger than paper made from rags. It was almost as close in its texture as parchment, and even when unsized did not suffer the ink to pass through it. It was excellent wrapping paper.

3. From the bark of the stems he obtained a paper so like, in every thing, to paper made from rags, that the difference could scarcely be distinguished.

The silk when taken from the pods, and being freed from the seeds, is hung up in thin bags in the sun, and when perfectly dry, may be used without any further preparation, instead of feathers, horse hair, wool, or cotton, for cushions, bolsters, pillows, mattresses, and coverlets. From eight to nine pounds is sufficient for a bed, bolster, and two pillows. It is lighter and warmer, when used in forming coverlets or

comforters, than cotton or wool, and is nearly equal to eider-down.

For spinning, the staple of the silk is too short, when taken alone, and therefore is combined with flax, wool, cotton, or raw silk.

One third of this silk, with two thirds of cotton, forms a very excellent mixture for gloves, stockings, and other articles of like manufacture. One part of this silk, and two of rabbits' fur, forms hats exceedingly light, soft to the touch, glossy, and which have a great resemblance to beaver hats.

The plant throws around it long roots with new eyes; these can be cut off in autumn or early in the spring, before the milk flows, and may be divided into pieces from four to six inches long, which may be planted in trenches, four or five inches deep, in an oblique position, with the eyes or buds standing up.

Where the plant grows wild in abundance, a bed for culinary purposes could be easily formed, from the roots in the manner above described, and would be fit for use the second spring; by which two years would be gained over plants raised from the seed.

Besides the above named articles manufactured from the silk, I recollect having seen, at several of the annual exhibitions of the Massachusetts Agricultural Society, in Brighton, tippets, capes, bonnets, and various other articles, which were very beautiful. They were formed by sewing the tufts of silk by the part which is attached to the seed, to linen, cotton, or silk cloth in rows, one overlapping the other, like the shingles on a roof. They had the appearance of the most delicate and rich fur; and so simple was the work that a child could execute it.

For embellishing the outer borders of pleasure grounds, the skirts of roads, avenues, clumps of trees, the sides of groves, and to intermingle with shrubs, all the American varieties may be used with picturesque effect.

On examining some botanical works since writing the above, I found that Parkinson had received the *Syriaca* from this country, and cultivated it in his botanical garden of rare plants, as early as 1629. He called it Virginia Silk, and it was stated that the French Canadians were in the habit of eating the tender shoots as substitutes for asparagus.

It is but little trouble to form in every garden, side by side, beds of dandelions, sea-kale, milk-weed, and asparagus, which, from the last of March, until the green peas appear, will afford a daily and various supply of delicious vegetables. They are all perennial plants, and when once set out, and properly taken care of in autumn and spring, will yield abundant crops, for all time, without removal.

H. A. S. DEARBORN.

Roxbury, March 9, 1835.

[From the *Genesee Farmer*.]

PROPAGATION OF FRUIT.—There is not naturally a propensity in the human mind to take much pains in raising fruit, without some stimulating or exciting agency. The mind must be excited to some object

before it will produce any unusual effect. The subject before us, no doubt, has been frequently brought before the readers of the *Genesee Farmer*, and may have been presented in such a light as to render it useless for me to attempt any addition thereto. But, however, even if this be the case, there may be some who did not give the attention to it which its importance demands; and it may be well to stir up their minds by way of remembrance—not that I possess or profess any superior knowledge on this subject, but by frequently conversing on these things we retain them in our memory, and are prepared to impart such information relative to them as is required.

It is not a little singular indeed, after all that has been said and done, that there is such an astonishing apathy in relation to the cultivation of fruits, the luxuries of which add so much to the comforts and conveniences of life. However, by the aid of an exciting agency, such for instance as the *Farmer*, we see that people begin to take an interest in this subject, and the means are facilitated for acquiring practical knowledge relative to this and every other subject to which such a journal is devoted.

The propagation of fruit, as practised in different ways, has materially benefitted all those who are engaged in the useful occupation of raising it. Grafting and inoculation are the most successful methods now in operation for propagating fruit. And to these two then I shall confine myself, to make some remarks and observations for the consideration of all who are concerned.

1st. Grafting.—This may be successfully practised on apples, pears and plums, and I think to better advantage than by inoculation. The modes of performing this operation are different, but I have generally given preference to what is called cleft grafting. The mode of procedure is as follows: After the stock is chosen, select a smooth place and cut it off—even the top with a knife; this being done, make a slit near two inches deep down the middle of the stock, with a knife prepared for the purpose; then prepare the scion, (taken from a vigorous shoot of the foregoing year, which should be cut in February,) sloping it on each side from a bud or eye, but leaving it thinner on that side which goes into the stock than on the outside, so that it may conform itself to the slit of the stock; then place the scion in the stock so that the inside bark of both may come exactly together. After this is done, the wounds of the stock are covered with an application of wax. The scions should be left with two or three eyes on them, and in case the stock be large, two of them may be inserted in one cleft, one on each side. Let not the scions be loose nor pinched, but a right temperature is necessary for their ready germination.

I have endeavored to render the method so plain, that it shall be the excuse of no one for not adopting it, for every one that has not good fruit may have it by a little exertion of their own. The only remaining difficulty is making the wax, and this can be done with but very little expense. Take 5 lbs. rosin, 2 lbs. beeswax, and 3 lbs. melted tallow, melt them together, and turn

it off into cold water, and work it till hard. This quantity of composition will be sufficient to set a number of thousand grafts. The means have been greatly facilitated for the making and application of this composition, from what they were when the old dirty method of using clay was practised. By a little attention, a person who has never practised it may perform the operation with complete success.

The best time for grafting is when the tree is about an inch through, taken off close to the ground. Although apples do well when put into the top of large trees, pears treated in this manner, my experience satisfies me, will never answer, because they will not unite firmly; hence their aggeneration cannot be effected, and when loaded with fruit they are apt to blow off. Undoubtedly the most suitable tree for the pear is the thorn-apple. The aptitude of their fixidity to this, as far as my observation has extended, is not equalled by any other tree. However, if these cannot be procured, small apple trees will answer, if grafted close to the ground, and the earth raised around them. This may be performed in April or May.

2d. *Inoculation*.—This method of propagation, it seems, is better adapted to peaches, nectarines, plums, &c., than grafting. I will give a description of a method as most successfully practised: "In August, take off a vigorous shoot from the tree to be propagated; then make choice of a stock about three or four years' growth, and in a smooth part of it make a down-right slit in the bark a little above an inch long, and another crosswise at the bottom of that, to give way to the opening of the bark; then with a penknife gently loosen the bark from the wood on both sides, beginning at the bottom; then prepare the bud by cutting it off, entering pretty deep into the wood, as much above as below the bud, to the length of the slit in the stock; after the bud is thus prepared, with the point of the knife and the thumb take out the woody part of it, carefully preserving the eye of the bud; then put the bud in between the bark and the wood of the stock at the cross slit, leading it upward by the stalk where the leaf grew till it exactly closes; then bind it about with coarse woolen yarn, the better to make all parts close regularly, and the bud incorporate with the stock, and the operation is done. The bud will be incorporated in about three weeks' time, when the yarn should be loosened, that it may not gall the bud. All buds should be taken from a vigorously growing shoot, and used immediately."

The choicest and the rarest varieties of fruit may be produced in a very short time by the above methods of treatment, and in fact I have known instances of grafts bearing the same year they were inserted—but they generally begin to bear in about three years. And who but he who has no taste for nature's richest productions would not even try the experiment? I have no doubt but all those who undertake the operation, will perform it with complete success, and ultimately be compensated for all extra expense and trouble.

We have a kind of apple, the value of which in the summer, (for they are not

good until then,) is from one dollar to one dollar and fifty cents, and we have kept them a year from the time they were gathered. They are called by the name of Rock Apple. They are pleasant flavored and annual bearers, and I think they might be profitably recommended to all orchardists. I mention this circumstance only to show the propriety and utility of propagation. As the season for grafting has approached, I hope the fruit growers of this country will avail themselves of this opportunity for having their plantations stored with the choicest varieties of fruit. R. S.

[From the Genesee Farmer.]

BURYING BEES.—Mr. Tucker: It is two years this spring since I first commenced bee-keeping. In the out-set I had no knowledge whatever of their management, and it was a stipulation of the bargain with the person of whom I obtained them, that he should, as occasion required, impart to me such facts as his experience would justify, in regard to their culture. This agreement was satisfactorily performed; and, aided by the information thus received, my success, for a tyro's, was such as to create an almost enthusiastic interest in this branch of rural industry.

In the autumn of 1833, I selected four hives, (double the number with which I commenced,) for wintering. Three of these had so limited a supply of honey, that I was advised to bury them, an operation which, in my mind, was little preferable to throwing them away. But I concluded to "try the experiment," and on one of the last days of November, they were "deposited beneath the little mound," where my mind figured them as possessing the interminable repose of "their last resting place." My absence on "the return of spring," that season when dying worms are wooed again to life, and the faded wing of the insect receives new colorings, beautifully wrought, from nature's dye, prevented me the pleasure of witnessing their exhumation, but the person who took them from their temporary sepulchre, (which was done about the 20th of March,) informed me that on their first introduction to the air and light, their animation was as perfect as that usually exhibited by bees in June. He said that he did not find half a gill of dead bees in all the hives. These hives gave swarms earlier and more frequently than the one that remained above ground, during the ensuing summer.

Last fall I concluded to continue "the experiment" with a single hive. The one selected was very light, probably not containing a sufficiency of honey to carry them half through the winter, had they been kept the usual way. In consequence of a rainy season through the last of November, they were not inhumed until December, probably as late as the 10th. They were occasionally fed in the fall, lest their supply should not be sufficient to insure a subterranean existence. My faith was as wavering when these last were buried, as on the previous winter, and as often as I looked at the spot where they were interred, I viewed it as the grave of my little insect friends.

They were taken up on the 28th of

March, and much to my satisfaction, found that the second experiment had terminated with the same happy results as the first. Not two dozen were lost, and *new comb was actually formed while they were in their "dark abode."*

My "modus operandi" is as follows. A hole is dug considerably larger than the hive, or hives, in every respect. On the bottom of the hole two sticks of three or four inches in diameter are placed for each hive, and on these the floor board, which should be a sound one, is placed. Another board, (two inch plank is preferable,) is put on the hive, and dry straw is as compactly as is convenient placed around it. This, in rainy weather, if the ground is clear from frost, allows the rain to pass freely down, while the space between the blocks furnish a ready reservoir, from which it is absorbed by the earth, without offering any injurious effects to the bees. The earth is placed upon the hive in a conical form, to turn the water from the hives, the top of which are about four inches below the surface. With respect to the experiment of 1833-4, I cannot say whether the apertures of the hives were closed, but in that of 1834-5, they were not. This experiment succeeded, but whether it is the best way of proceeding I shall not advise.

I regret that I did not weigh my hives, in both instances, previous to burying and on disinterring them, that the amount of food consumed might have been ascertained. But my experiments were both of them faithfully tried, and unnecessary ceremonies were dispensed with. The quantity of honey consumed, however, was small, as none but very light hives were selected, and their weight in the spring was apparently nearly as great as in the fall. It is my intention in future experiments to mark items more particularly.

In selecting the spot for burying, a dry, and cold, rather than a warm one, should be chosen. An individual of my acquaintance buried on the south side of a dry hill, and an entire loss of all thus treated was the consequence. I attributed it, (though perhaps some other defect was the cause,) to such situations being more exposed to frequent freezings and thawings, subjecting the insects to more frequent change of temperature, a circumstance injurious to all that comes within its influence. If the situation is such as that the ground will freeze immediately after the trust is committed to it, and remain so until time to "remove the deposits," to me it would appear most favorable. Yours, etc.

WILLIAM BACON.

Richmond, (Ms.) April 23, 1835.

STUMP LIFTER.—Capt. L. Nordcross, of Dixfield, Maine, has invented a new machine for lifting out or removing stumps. It consists of a large screw placed in a nut, which is attached to legs like those of a surveyor's compass. These, being sufficiently strong, are placed above the stump, and it is then grappled to the screw by chains or hooks. A large sweep, like that used in some old fashioned cider mills, having a nut to fit, is put upon the screw, and horses or oxen hitched on the other end, by means of which the stump is raised from the ground by driving round the sweep.

[From the Maine Farmer.]

CAN ONE HUNDRED AND FIFTY BUSHELS OF INDIAN CORN BE RAISED ON AN ACRE OF LAND?—Mr. Holmes: In a late communication in the Maine Farmer I stated my opinion that 150 bushels of Indian corn might be raised on an acre of land. This I am aware may be thought an unguarded assertion by some, perhaps most of the readers of the Farmer. This, however, was not carelessly or thoughtlessly made. It never has been my object to countenance wild and visionary schemes of fancied improvements; but to establish simple truth. Yet as this project is considerably greater than has been obtained by distinguished agriculturists, perhaps an exposition of my view may be proper.

One hundred and fifty bushels is 38,400 gills: of course, if we can raise this number of ears on an acre, that will make one gill each, it will be done. We all know that it does not require a very large ear to yield one gill of shelled corn. Mr. Bowles states that in rearing his crop the last year of 116 bushels to the acre, he planted 8000 hills with 4 plants to each hill; this, allowing one ear to each plant, would be 32,000 ears to the acre, and to have produced the quantity here mentioned would have been only one gill and one fifth to each plant, or four gills and four-fifths to each hill. That this cannot be obtained by extra manuring seems to be evident for this reason, that excessively high manuring produces such a luxuriant growth of stalks and leaves, that the sun and air are too much excluded to mature the ear. Here then is the principal difficulty, how then can this be obviated? I have frequently observed a perceptible difference in the proportion of the ear to the stalk in different kinds of corn under the same treatment, as regards manuring and cultivation. Cannot an improvement in the habits of the corn plants be made in this respect? Satisfactory experiments have determined that the same variety of corn, as well as other plants, may be brought to ripen earlier or later, by selecting for a number of years in succession seed that ripens earlier or later, as the case may be. But I have never been made acquainted with the fact that experiments have been tried in like manner for the purpose of obtaining a variety that should excel the superiority of the ears in proportion to the size of the stalks. Experiments on many kinds of vegetables have been tried, with remarkable success, to render the fruit more perfect in proportion to the vines or stalks. For instance, cabbages and melons and many others. A writer in the 2d vol. of the Maine Farmer page 115, says, "In reference to seeds, it has long been known to farmers and gardeners, that those that are new and fresh produce plants with more luxuriant foliage, and less inclined to run into flowers and fruit, than such as have been kept some time." "These circumstances," he says, "are carefully considered in the culture of cucumbers and melons, the seeds of which are seldom used until several years old. A similar attention to this law, in reference to the seeds of other vegetables, is productive of equal benefit. Peas, for example, are well known as apt to run to straw, where the ground is rich and moist. The employment of old seed is the only suitable remedy." A friend of mine once stated to me that his father, who was an experienced farmer, said that one bushel of old rye was worth two of new to sow. This was winter rye. I know not the reason of his preference, I mention it to excite the

curiosity of others to try experiments. H. C. says, (see page 131, of New-York Farmer) success in raising double ears or obtaining a seed that has this propensity, must depend, there is reason to believe, much more upon the selection of the seed for a succession of years from stalks bearing twin ears than upon the circumstance of its being the eight or twelve rowed kind. It may be remembered that H. C. was discussing the merits of these different varieties of corn. It recognizes however the existence of the principle we are now advancing, viz., the controlling effect of selecting seed from plants whose peculiarities we wish to continue.

If a propensity to produce twin ears may be obtained in this way, I know not why any other might not to some extent. I do not expect that all plants are alike susceptible of so great an alteration in their habits as some we have mentioned, but as the tendency to an excessive luxuriance of growth in the stalks of many kinds of plants seems at present to present an almost insurmountable obstacle to future improvement as to increasing their products to the acre, the subject is well worth a patient and persevering investigation.

There is another particular to which I would invite public attention, which is this. H. C. says, (also at p. 131, New York Farmer, before referred to,) the richer the soil is made by manure, the later in all cases is the ripening of the corn, as the forage becomes more luxuriant and succulent. That this is a fact I admit as far as late ripening is concerned, but I do not admit the cause assigned. If I am correct in my observation, the most luxuriant corn shows its tassels and silk first and also fills the ear the soonest, though it does not ripen so soon. What is the cause of this? As far as my observation extends, the same remark will apply to grain. As I have given my views at some length on the effect of fermentation on the vegetation of grain, I will not enter into details on that point, but observe, that though Indian corn will bear the effect of excessive fermentation much better than grain, yet I am some suspicious that a re-rooting process may take place in corn, somewhat similar to grain, and this will certainly, if it does take place, protract the ripening of the stalk at the bottom, and of course the ear. Public attention does not appear to have ever been directed to this point. Another thing bears strongly on my reflection, though I am hardly willing to vouch for it, that I have at some time or other seen appearances on the roots of corn somewhat similar to those I have seen on grain. It is from a consideration of these facts that I have been led to advance the idea, that when we are properly skilled in the nature and use of manures, as well as have a correct understanding of what may be effected in the habits of plants, by attention to selecting seed in the best manner, as well as the best method of cultivation, that our crops of almost all kinds may be somewhat advanced.

Once more, and I have done with this subject for the present. I have never been in the practice of using Lime and Gypsum and other manures of a similar nature myself. I shall make a beginning this year. That these manures have "wonder working powers" I have no doubt, and when used with skill will be of essential benefit in producing the effect desired. But we must not expect complete success all at once; nor will it do to establish theories on solitary facts, we must have decisive evidence of a plenary kind.

J. H. J.

Peru, April, 1835.

[From the New-England Farmer.]

WASH FOR FRUIT TREES.—A friend and patron of our paper wishes us to inform him what is the most improved wash for fruit trees, and says, "If I remember right there has been an improvement on Forsyth's composition." The following was, some years since, recommended by Mr. Benjamin Wheeler, of Framingham, Mass.

"Dissolve two pounds of potash of the first quality in 7 quarts of water, for the bodies of the trees. If the limbs are covered with moss or lice, I take a painter's brush and apply the solution to the moss, &c. with care not to touch the leaves or buds. It may be done at any time of the year when we are most at leisure. Once in two to four years is generally sufficient. I have no general rule, however, but wash them as often as they appear to need it, which is always when the bark is not smooth.

"No person need be afraid," Mr. W. continues, "of this application's injuring fruit trees; but it may be applied with the utmost confidence. I have used it for nearly twenty years with great effect. The reason it has not been more generally used is that it has been fashionable to daub the trees with lime, clay, manure, and other compositions, which take two or three years to wash off before the tree will look natural. When this solution of potash is applied it has the desired effect immediately. It kills the moss and lice at once, and the first rain that comes washes the bark perfectly smooth, and gives it a fair, natural, and healthy color."

ORIGIN OF "HERBEMONT'S MADEIRA GRAPE."—* * * Since I wrote to answer your inquiry, I have learned a little more concerning the origin of the vine called "Herbemont's Madeira." It certainly has been received from France, under different names, and also from Madeira. It is most undoubtedly one of the most esteemed families of vines in Europe. In certain situations in this country, Charleston for example, it does most admirably well. It has been received from France by the names of "Muscat gris," "Pineau," and "Maurillon." I have not yet been able to learn by what name it has been received from Madeira. It changes some of its characters so much in this country, as scarcely to be known again—for here it grows to the size and vigor of our strongest native vines. The nomenclature of the vines is, in Europe, in such a chaotic state, that it would take the labors of at least twenty Hercules to clear it up. Now that this culture is fairly begun in this country, we should be very particular with our names; and confusion in nomenclature is frequently inextricable at the same time that it is exceedingly disadvantageous to the cultivators. The names should be short, if possible, and unchanged after they have been adopted. I would suggest, for example, that the excellent kinds introduced by the names of "Norton's Virginia Seedling," and "Cunningham's Prince Edward," be simplified, by suppressing every thing but the names of the gentlemen entitled to the honor of naming them.—N. HERBEMONT.

[Farmers' Register.]

NEW-YORK AMERICAN.

JUNE 6-12, 1835.

FOREIGN INTELLIGENCE.

From Paris, we have our papers to the 24th April, by the Albany.

The *Journal du Haere* of Thursday, 23d April, has the following:—"Commodore Elliott, of the American frigate the Constitution, arrived here this morning from Paris. It is believed that the Constitution will sail this evening."

The Constitution was at Cherbourg on the 24th, to take in water.

The *Paris dates* are of the 28th of April. The *Courrier Francais*, and other opposition papers, pretend to quote Mr. Livingston as saying, in relation to the amendment requiring explanations previous to the payment of the indemnity, that his return to Washington would be the signal of hostilities. This is manifestly a fabrication. Mr. Livingston would not be guilty of the indiscretion of saying such a thing, even if he thought it; and he is too sagacious a man, and understands the affairs of both countries too well, to entertain any such opinion.

This is a question which will not be decided by silly talk, or shallow blustering, or idle rhodomontade on either side—but by the calm good sense, and reason of the thing, and by the mutual interest of each of the parties, to preserve a good understanding with the other.

It must not be disguised however, from our readers, that Mr. Livingston, as we have from private but authentic sources, the certain assurance—considers the proviso in question, so nearly tantamount to a rejection of the indemnity, that he feels himself bound by the spirit of his instructions, to return in the Constitution to the United States—which frigate therefore may be hourly looked for.

On the other hand, the French Ministers are desirous to avert all difficulty, as the following extract from a letter, written by a gentleman who is not at all likely to be mistaken, will show.

Extract of a letter from Paris, dated April 22d, 1835.

"The departure of Mr. Livingston for America will doubtless occasion much speculation. I can give you the positive assurance, however, as received from M. de Broglie through my friend M. Jay and others, that Ministers attach not the slightest importance to the amendment of which you will hear so much. They are (said M. de Broglie) perfectly satisfied with the explanations already given by Mr. Livingston, and they propose submitting an amical note at Washington, inviting the U. S. Government to confirm these explanations.

It is simply to comply with the decision of the Chamber as imposed on them, and for the purpose of protecting them before the Chamber. Mr. Livingston however, takes a very different view of the case.

The famous process going on in the Chamber of Peers, against a mass of 500 or 600 persons, taken up in the Lyon's affair has placed, the government in a very awkward situation; it was one of the greatest errors of Louis Philippe, and how it is to be got over, is difficult to say.

This market continues to be good, for cotton.—The American planters must make much money this year, and the merchants who had nerve to do business notwithstanding the high prices, will make money also."

Parliament having been prorogued till the 12th of May, in order to give time for the new elections rendered necessary by the late ministerial appointments, there is nothing of much interest from England. Many of the new official persons had been re-elected; among them Mr. Labouchere, the Master of the Mint, whose opponent was young D'Israeli, the author of Vivian Grey; and Mr. Powell Thompson, for Manchester. The great struggle, however, was to be against Lord John Russell, for South Devonshire; and very strenuous efforts were making by the Conservatives to defeat him there, if possible.

The following members of the administration have already been returned without opposition:—Right Hon. T. S. Rice, for Cambridge; Sir T. Troubridge, for Sandwich; Sir J. C. Hobhouse, for Nottingham; Lord Seymour, for Totness; Mr. W. H. Ord, for Newport. An opposition is threatened to Lord J. Russell, in Devonshire; to Lord Morpeth in Yorkshire; to Mr. Labouchere, at Taunton; and to the Lord Advocate, at Leith; but we have very little doubt that in all these cases it will be unsuccessful. The only places where a contest has actually taken place are Manchester, where it will be seen that the President of the Board of trade has defeated the Tory candidate by an overwhelming majority of not less than 1366, and Taunton, where Mr. Labouchere has been returned by a majority of 170 over Mr. D'Israeli.

With the Ministerial candidates, at the last general election, rejection was the rule, not the exception; at the elections consequent on the breaking up of the late and last Tory Administration, we have well grounded hopes of being able next week to announce that the members of a liberal Ministry have been returned to Parliament, without a single exception. So much for Conservative prognostications.

The affairs of Spain seem pretty much as usual, though the new commandant for the Quech, Valdez, has declared, it is said, he would not see Madrid again till he had put an end to the insurrection. A rumor that France had been called on by the Cabinet at Madrid to interfere more effectively, for the suppression of the civil war, is discredited by the London papers—which justly argue, that even civil war is to be preferred, to the perilous intervention of a foreign army.

THE RESTORATION OF THE JESUITS.—We copy the following from the *Standard*:

"Rome, Jan. 23, 1835.—At a solemn sitting of our Holiness the Pope at Rome, it was decreed—

"His Holiness the Pope Gregory XVI., in consequence of a report which we, the Secretary of the Holy Congregation for the Propagation of the Faith, (i. e. the Jesuits,) have made to him, has given and accorded to us in the name of our Lord and Saviour, as his representative, &c., as follows:

"1. Plenary indulgence, applicable by means of the prayers of the church for the souls in purgatory, as well as applicable to all and to each of the faithful, of both sexes, who, truly penitent, and having confessed and received the sacrament, shall visit devoutly the church of Montmartre, in the diocese of Paris, (under the Restoration it was Mount Valerian,) as well as the great cross of Calvary, which is erected in the same church, and shall so visit the church and cross aforesaid on the days of the fetes of the invention, and of the exaltation of the holy cross, and shall pray devoutly there for the propagation of the faith. (The cross here spoken of was a cross planted by the Jesuits under the Restoration.)

"2. A partial indulgence of 100 days to be gained twice in the month, by those who shall visit devoutly the great cross, or Calvary, in the church aforesaid, on the days designated by the ordinary.

"Given at Rome, &c. HYACINTHE."

(i. e. M. de Quelen, Archbishop of Paris.)

TURNER.

The following is the address of his Excellency Muhammed Nouri-Effendi, Envoy Extraordinary and Minister Plenipotentiary of the Sublime Porte, to His Most Gracious Majesty, at a public audience granted yesterday:—

"Selected for this mission through the confidence reposed in me by my august master, the Sultan, to be his representative to your Majesty, I deeply appreciate the honor conferred in an audience which furnishes me with the opportunity for expressing to your Majesty the particular sentiments of His Imperial Highness.

"The perfect harmony that has existed so many years between the Sublime Porte and Great Britain is not solely founded upon esteem and personal considerations; it exists upon political interests, which can only serve to strengthen the friendship already subsisting between the two august Courts.

"The commerce of Great Britain has experienced

in the Ottoman Empire perfect freedom and facilities, such as have not been met with in any other country, and the people of his Highness have enjoyed without restriction the admirable productions of industry created by your Majesty's subjects.

"In consequence, the Sublime Porte, duly appreciating and esteeming the importance of our friendly relations with one of the most enlightened and most powerful nations among the powers of the earth, does not doubt but that a system both benevolent and reciprocal will gain the entire solicitude of your Majesty's Government, and that it will shortly be considered as a means only for strengthening more and more the bonds of friendship which unite the two Powers.

"This union, Sir, is one of the objects most precious and nearest to the heart of his Highness, my august master, and it is a proof of the sincere and affectionate sentiments proffered by him for your Majesty's royal person.

"April 29, 1835."

THE EARTHQUAKE IN CHILI.—By an arrival at Baltimore, we have been put in possession of Valparaiso papers to the 18th of March. They contain the particulars of the terrible earthquake on the 20th of February, the ravages of which were even more extensive and deplorable than would appear from the verbal accounts already published. Almost the whole of the Southern section of the Republic has been swept, as with the besom of destruction. Even at the island of Juan Fernandez, more than 300 miles from the coast, the earthquake was felt with tremendous violence. The sea at the anchoring ground retired to such a distance, that where there had been twelve fathoms water, the ground was laid bare: but soon after, the sea returned with such fury, that it completely demolished the town. The governor and garrison saved themselves by fleeing to the heights; but beyond this, the particulars had not been received.—We subjoin such translations as our time permits, and shall perhaps give others in a future number.

VALPARAISO, March 4.—Every day we receive new details of the sad calamity which has befallen the greater part of the cities and towns in the Southern section of the Republic. The ruin of Concepcion and Talcahuana is complete. At Concepcion there remains only one house for the shelter of the inhabitants. Of Talcahuana, according to the more recent advices, not a vestige remains. After the earthquake, the sea retired from the coast where the town was situated, about a mile, and then rolled in over the whole town, and in its reflux swept it almost entirely away.—The fragments that remained were demolished and buried by two subsequent seas which successively overwhelmed the site of the town. When the sea had regained its usual level, the inhabitants, all of whom at the approach of the inundation fled to the neighboring heights, returned to the place where the town had been situated, and for several days many of them have been engaged in disinterring some remnants of their property. The sea rose 33 feet above its ordinary level, and drove into the town-square the national bark Mapocho, and placed other vessels in imminent danger.

The road from Talcahuana to Concepcion is almost entirely destroyed by the deep fissures and sloughs which have been created, consequently the destruction of property and the interruption of the channels of intercourse which facilitate the subsistence of a town, must be alarming.

TALCA, Feb 20.—Two hours ago this town ceased to exist. This may truly be said; for its regular and comely edifices, which gave it the third place among the cities of Chili, are transformed into a mass of ruins, or buildings so essentially damaged that they cannot be inhabited without great danger.

Talca is 120 miles N. E. of Concepcion. At San Juan de Dios, where some bricklayers were at work when the earthquake came on, they almost all perished. Children and grown persons have alike disappeared from the number of the living, and in short, the whole presents a scene of deplorable calamity.

The movement of the earthquake was not so violent as it was long-continued. It commenced here at about 8 minutes past 11, and it is calculated that the two principal shocks lasted 2 minutes and 20 seconds.

VALPARAISO, March 5.—By letters and passengers brought by vessels which arrived here day before yesterday, yesterday, and to-day, the news is confirmed of the ravages of the earth.

quake in the provinces of Concepcion and Maule.

Concepcion, Talcahuana, Penco, Tome, Arauco, Colchero, Pemuco, Yumbel, Rere, Los Angeles, La Florida, Coelemu, Ranquil, Cauquenes, San Carlos, Quirique, and other towns of both Provinces, have been ruined in consequence of that terrible event. Talcahuana, Penco and Tome were thrice inundated by the sea, and in Arauco and Colchero it rose to the walls. In the port of Concepcion also, it rushed back and forth several times.

The loss of lives in Concepcion does not exceed 50 odd; in Talcahuana, very few.

If we except the national schooners Juana and Jertrudis, which were stranded in the port of Concepcion, no other vessels have suffered irreparable injury.

The earthquake is said to have been occasioned by the eruption of the volcano of Antuco, in the latitude of Concepcion, and about 30 leagues from the coast.

For the sufferers \$9000 had been subscribed in Valparaiso prior to the 16th March, \$1000 in the Alameda, \$6196 at Santiago, two Convents \$3000.

[From the Journal of Commerce.]

A WEEK LATER FROM BUENOS AYRES.—By the brig Paulina, Captain Clark, we have received Buenos Ayres papers to April 4th.

The balloting which was going on at the date of our previous advices, had resulted in the ratification of the resolution of the House of Representatives appointing Gen. Rosas to the chief authority of the Province,—by a vote of 9316 to 4. Gen. Rosas is therefore Governor of Buenos Ayres, with extraordinary powers.

A treaty of peace and alliance has been celebrated between the Governments of the Provinces of Tucuman, Santiago del Estero, and Salta.

An engagement took place on the 7th of March, between a body of Buenos Ayres troops and Indians on the one part, and a body of hostile Indians under Lanquitrux, on the other. The latter were totally defeated, with the loss of killed, 133 Indians, and 67 Squaws—prisoners, the Caciques Guichel, Lamen and his son Antil, and 353 Squaws, besides 34 Christian captives, of both sexes, recaptured—and there also fell into the hands of the victors, 2000 sheep, 300 goats, 200 oxen, and 132 horses.

As if the Republic of La Plata were not sufficiently broken to pieces, a section of Salta called Jugui, has seceded therefrom, and declared itself independent. It adds one more to the allied Provinces constituting what is sometimes called the Republic of La Plata.

SUMMARY.

THE REPUBLIC OF LETTERS.—Under this title Mr. Geo. Dearborn, of this city has published in weekly numbers, at 6 1-4 cents each, during the past year, a periodical, embodying a choice selection of approved literary works.

The 52 numbers published, constitute two handsome volumes, embracing, as by reference to the advertisement, will be seen, some of the standards of English literature.

In order to inspire additional confidence in the selections for this publication, and in the discrimination and taste, which will be exercised in that matter, the publisher has made an arrangement with Mrs. A. H. NICHOLAS of this city, to superintend this department. Competent as she herself is, to such a task, she will yet be further aided by the suggestions of her brother C. F. Hoffman—and by those of Washington Irving, G. C. Verplanck and E. Everett.

Under such auspices, we cannot go wrong, in claiming for the Republic of Letters—large and general patronage.

A night boat is now running on the ferry between this city and Powles Hook. After the 15th, the Newark Railroad Company will also run a night car. All such arrangements contribute to mutual benefit and convenience.

ACCOUNTABILITY OF STEAMBOAT CAPTAINS, STAGE OWNERS, &c.—We have been instant in season and out of season, to arouse public attention

to the necessity of subjecting to the penalty, which the laws will not fail to inflict upon carelessness, ignorance, or recklessness, all through whose instrumentality, accidents in steamboats, or other public conveyances, occur.

In furtherance of this purpose, we annex, from a London paper, the report of a case in Scotland, as affording an instance in point of the value of such investigation; whereby, if there be criminality, it is ascertained and punished—and if not, the fact is made manifest, and the party against whom rumor and suspicion might otherwise be operating disadvantageously, is sent forth free and unimpeached. Hence it is clearly for the interest of all, but guilt, that such investigation should be had:

CIRCUIT COURT, GLASGOW, April 22.

Robert Wallace, master of the Kilmun steam vessel, was accused of culpable homicide. The charge was to the effect that he had contravened the 44th and 46th sections of the regulations of the river Clyde trustees, formed under act of Parliament, in having navigated his vessel at a greater distance from the quay at Dunglass than was necessary for the reception of passengers from a small boat coming off from that quay—in having thrown a rope to the small boat for the purpose of attaching it to the steam vessel, at a time when, from the state of wind and tide in the river, it was improper and unsafe to do so, and dangerous to the lives of the persons on board—and also with setting the paddles of the steam vessel in motion while the said small boat was attached to her, or at least before the boat was removed beyond the influence of the steam vessel—by all, or part of which neglects and contravention of the regulations, the small boat was run down, and at least nine individuals were culpably, recklessly, and negligently drowned, and bereaved of life by the pannel, Robt. Wallace. Mr. Wallace pleaded Not Guilty to the charge.

Several witnesses were examined for the prosecution, two of them bricklayers, who had been on board the small boat, and two of them passengers in the Kilmun; but from none of the evidence could there be adduced the slightest imputation upon the character or conduct of Captain Wallace upon the melancholy occasion referred to. It was proved that the weather was stormy—that the small boat was over crowded—that Captain Wallace called distinctly to the ferryman to let go the rope, when he found the steamer to be in a perilous position—that he did not direct the engine to be put in motion till he had so called at least twice—and that had the hold of the rope from the small boat been withdrawn when the orders were given, the accident would not have happened.

After proceeding with part of the evidence the Advocate Depute stated to the Jury, that he had thought it his duty to bring the case before them for the purpose of satisfying the ends of justice—and in deference to that anxiety so universally felt that every case involving, as this did, a great loss of life, ought to receive every possible investigation—also, that the public might have an opportunity of seeing whether any blame was attachable to the pannel, or any other person, in the melancholy event which had occurred; and likewise by instituting a trial here, to induce others to act in similar circumstances with the greatest caution. Having, therefore, brought forward the case, he was satisfied that he had done enough to show the Jury and the public that no blame whatever could be attached to any party, and now considered himself perfectly justified in proceeding no further with the case.

Mr. MAITLAND (Counsel for Mr. Wallace) said he had been instructed by that gentleman to thank the Public Prosecutor for having brought the case before the public, and also for having in so very handsome a way withdrawn it. That respectable gentleman, he observed, would never cease deeply to regret the loss of life that had occurred in circumstances with which he was so intimately connected, however guiltless he might be of the causes which led to that catastrophe.

The Jury having returned a verdict of Not Guilty, the Court dismissed Mr. Wallace from the bar, after stating that he left it with a character not only unimpeached, but, on the contrary, with the credit of having always conducted himself with great propriety.

EDWARD JOHNS has been recognized by the President as Russian Consul at New Orleans.

SPIRIT OF ENTERPRISE.—We understand it has been determined upon by the inhabitants of the thriving town of Flushing, to immediately open a correspondence, by Committee, with the various Manufacturing interests of Newark, Patterson, Lynn, and other towns in different parts of the Union, calling their attention to the superior advantages which Flushing presents, and offering land, &c. to them at a low perpetual rent, with the privilege of purchase, as an inducement for them at once to locate themselves in that town.—[Communicated.]

LICENCES IN BROOKLYN.—We learn from the Brooklyn Advertiser, that the Common Council of that city have resolved,—

1. That no retail license be granted to a Grocer.
2. That licenses be granted to citizens only.
3. That Tavern licenses be granted strictly in conformity with the Act in such case made and provided.

This is bravely done in our sister city; and may operate, possibly, advantageously upon our own Common Council.

PUBLIC SCHOOL SOCIETY.—From the 13th Annual Report of the Trustees of the Public School Society of this city, it appears that the number of schools under its charge, including 23 primary schools, is 55, comprising an aggregate of 13,897 pupils, 7354 of whom are males, and 6543 females. Increase during the year, 1390. Of the whole number, 1242 are colored, viz. 611 males, and 631 females. The expenditures of the Society, for all purposes, including buildings and the payment of \$10,000 to the Savings Bank, have been, during the year ending May 1st, \$115,518 95. The receipts have amounted to an equal sum, including a balance of \$8400 21 on hand at the commencement of the year, and \$15,000 borrowed. Balance in the Treasury 1st of May, \$1336 09. Of the receipts, \$78,462 45 comes from the School Commissioners. The whole debt of the Society at the present time is \$45,000. The value of their real estate is probably three or four times that sum.—[Journal of Commerce.]

WILD, WILDER, WILDEST.—The spirit of speculation in this country, is now going rapidly through these degrees of comparison. We have seen some of the positive, and even of the comparative degree in this city; but the superlative was left for Charleston, where, as we learn from the Courier of the 3d inst., the subscription to the new "Bank of Charleston," of which the capital is only two millions, exceeded, in the city of Charleston alone, eighty-one millions of dollars; and as books were opened in other parts of the State, that amount was swelled probably to ninety millions of dollars.

As one fourth was required to be paid down at the time of subscription, the sum paid into the hands of the commissioners in Charleston, was twenty millions, two hundred and seventy-seven dollars!—more than ten times the whole capital.

The task of distributing this stock is one, that no one need envy to the commissioners.

There is a common saying, "It will be all the same an hundred years hence"—and a deal of true philosophy is there in the proverb. How insignificant appear all the quarrels, and clashing interests, and opposing plans and strokes of outwitting policy, and shrewd diplomacy, which agitate us now, when we consider that "a hundred years hence" the result, whatever it may be, of all this turmoil will not then be felt by those who will then be upon the stage! The descendants of Charles I, of England, and Oliver Cromwell intermarried in the fourth degree.—[Alexandria Phoenix.]

PASSAGE IN SHAKESPEARE CORRECTED.—"Vaulting ambition that o'erleaps itself," should be "its self." Sell is saddle an Spenser and elsewhere, from the Latin and Italian. This emendation was shown to the late Mr. Hazlitt, an acute man at least, who expressed his conviction that it was the right reading, and added somewhat more in approbation of it.—[Landon's Examination of William Shakespeare.]

FLUSHING PROPERTY.—About one hundred lots in the village of Flushing were sold by Messrs. Franklin & Jenkins yesterday. The whole sale was gone through with at prices deemed unusually high. Most of the Lots were 25 to 100 feet, and brought from 250 to 600 Dollars each; others measuring 50 to 100 feet sold, the highest, at 1500 Dollars.

Yesterday, a son of Jacob Van Clief, six years old, fell into a well at Staten Island, through the door of the casing—the well was forty feet deep, with 12 feet of water in it. A rope was thrown to him which he made fast to his body, and was hauled up uninjured.

It would seem that the traffic in wives is not confined to England; but, though in other countries they may not be more beloved, they appear to be more dear. The *Gazette du Limousin* states that, a few days ago, two artisans of Compreignac, near Bellac, struck a bargain over their cups, by which one transferred his wife to the other for 1,000 fr. The repudiated spouse, however, who is young and handsome, refused to give herself up to the purchaser, who has threatened to bring an action against the husband upon the contract, which is duly signed and sealed.

IMPORTANT TO MARINERS.—Several successful experiments have been tried on the North Humber Bank, with a portable apparatus admirably adapted for conveying a line from a distressed ship or wreck, to the shore.

The apparatus consists of a gun (manufactured by Mr. Blanch, gun maker, of Hull), which will propel a line made fast to an arrow to the distance of 150 to 200 yards, and thus obtain from even a single individual on the beach, all the assistance which such exigencies require.—[Army and Navy Chronicle.]

A traveller in the Island of Cuba has estimated that ten thousand dollars worth of cigars are consumed daily in the city of Havana.

The Navy Commissioners have issued proposals for the delivery of white oak keelpieces and other timber for eight seventy fours, eight frigates, and ten sloops of war, by the first of August, 1836, at the naval stations of Portsmouth, Boston, New York, Philadelphia, and Norfolk. This is an addition of nearly one third to our present naval force. We observe in the list of the European navies, that several States have a large proportion of steam vessels, and particularly the English and French. Would not steam ships be greatly the most efficient force for the defence of our coast with its large bays and rivers?

The Boston Commercial Gazette, making a comparison of our naval resources with those of other nations, estimates that we have at present in the merchant service about 70,000 seamen.—[Balt. Am.]

A tremendous storm of both wind and hail occurred a few days since in Robertson and Sumner counties, (Ten.) Some of the hail stones are said to have been weighed and to have been of the incredible size of *three quarters of a pound weight*!—There was a great destruction of timber and much damage done to the plantations but no lives lost so far as we have heard.—[Nashville paper.]

CHOLERA.—This disease seems slowly ascending the western waters, and settling at various points along the Mississippi valley. The Pittsburgh Statesman, of the 27th ult., says the steamboats arriving at Louisville have had many cases on board; but it makes no mention of the disease having taken root on shore, yet, at that point.

A PARENT'S LOVE AGAIN PAINFULLY EXEMPLIFIED.—On Friday last, the sloop John Felter, owned and sailed by Capt. Lemuel June of this place, put in at Pullen's Point for freight. Mrs. June, and her little son about four years of age, were on board, having just returned from New York. The captain and his hands had come down to the village, leaving Mrs. J. and the child on board, when the latter accidentally fell overboard. The tide was running strong at the time, and the mother, regardless of her own life in her anxiety to save her child, plunged in after him. Their cries were heard by a man some distance from the Point, who hastened to the spot barely in time to snatch the mother from a watery grave. He then discovered the

child some rods from the vessel, drifting with the tide. He sprang into the boat, and soon brought him to shore, but not until the vital spark had fled.—[Haverstraw Times.]

A STRING OF PUNS, GOOD, BAD, AND INDIFFERENT.—An auctioneer ought to be by nature strong; for, though only one man, he is often called upon to knock down a lot. Spring is welcome to the trees, because, they are re-leaved by its approach. Those persons who are in business the most sharp, usually get the most blunt. All blood may be said to be useless which is in vein. It is remarkable, that in music those strains please the most which are allowed to be dull set. The trade of a blacksmith is one of little labor to himself, inasmuch as most of his work is done by a vice. A statesman begins to lower himself when he consents to be hired by others. The additional day to February once in four years seems very naturally to increase the spring necessary for a leap year.—All persons who can defer their laughter until a convenient time, should be taken to the Humane Society, as extraordinary cases of suspended animation.—Those damsels who admire mustachios must be insincere in saying they dislike hair lips.—When people have red hands, they should always play at loo, as every thing is gained at that game by a palm flush.—Pugilists begin their battles from a paradox; for they stand up and "fall to."—James Eastman, the thief who tried to escape up the chimney, and was stopped by the grate, must have found a great bar to his rising.—In classing birds, we should say weather-cocks are meant for the church; but hens are decidedly the lay subjects of the state.

Extracts from Irving's *Abbotsford*.

WASHINGTON IRVING'S FIRST BREAKFAST WITH SCOTT.—On the following morning, after an early breakfast, I set off in a post chaise for the Abbey. On the way thither I stopped at the gate of Abbotsford, and sent the postillion to the house with my written introduction and my card, on which I had written that I was on my way to the ruins of Melrose Abbey, and wished to know whether it would be agreeable for Mr. Scott (he had not yet been made a Baronet) to receive a visit from me in the course of the morning.

In a little while the "lord of the castle" himself made his appearance. I knew him at once by the description I had read and heard, and the likeness that had been published of him. He was tall, and of a large powerful frame. His dress was simple, and almost rustic. An old green shooting coat, with a dog whistle at the button hole, brown linen pantaloons, stout shoes that tied at the ankles, and a white hat that had evidently seen service. He came limping up the gravel walk, aiding himself by a stout walking staff, but moved rapidly and with vigor. By his side jogged along a large iron-grey stag hound of a most grave demeanor, who took no part in the clamor of the canine rabble, but seemed to consider himself bound, for the dignity of the house, to give a courteous reception.

Before Scott had reached the gate he called out in a hearty tone, welcoming me to Abbotsford, and asking the news of Campbell. Arrived at the door of the chaise, he grasped me warmly by the hand: "Come, drive down, drive down to the house," said he, "ye're just in time for breakfast, and afterwards ye shall see all the wonders of the Abbey."

I would have excused myself, on the plea of having already made my breakfast. "Hoot man," cried he, "a ride in the morning in the keen air of the Scotch hills, is warrant enough for a second breakfast."

I was accordingly whirled to the portal of the cottage, and in a few moments found myself seated at the breakfast table. There was no one present but the family, which consisted of Mrs. Scott, her eldest daughter Sophia, then a fine girl about seventeen, Miss Ann Scott, two or three years younger, Walter, a well grown stripling, and Charles, a lively boy, eleven or twelve years of age, I soon felt myself quite at home, and my heart in a glow with the cordial welcome I experienced.—I had thought to make a mere morning visit, but found I was not to be let off so lightly. "You must not think our neighborhood is to be read in a morning, like a newspaper," said Scott. "It takes several days of study for an observant traveller that has a relish for auld world trumpery. After breakfast ye shall make your visit to Melrose Abbey; I shall not be able to accompany you, as I have some household affairs to attend to, but I will

put you in charge of my son Charles, who is very learned in all things touching the old ruin and the neighborhood it stands in, and he and my friend Johnny Bower will tell you the whole truth about it, with a good deal more that you are not called upon to believe—unless you be a true and nothing-doubting antiquary. When you come back, I'll take you out on a ramble about the neighborhood. To-morrow we will take a look at the Yarrow, and the next day we will drive over to Dryburgh Abbey, which is a fine old ruin well worth your seeing"—in a word, before Scott had got through with his plan, I found myself committed for a visit of several days, and it seemed as if a little realm of romance was opened before me.

The General Affection entertained for Scott.—These simple anecdotes may serve to show the delightful play of Scott's humors and feelings in private life. His domestic animals were his friends; every thing about him seemed to rejoice in the light of his countenance: the face of the humblest dependant brightened at his approach, as if he anticipated a cordial and cheering word. I had occasion to observe this particularly in a visit which we paid to a quarry, whence several men were cutting stone for the new edifice; who all paused from their labor to have a "crack wi' the laird." One of them was a burges of Selkirk, with whom Scott had some joke about the old song:

"Up wi' the Souters o' Selkirk,
And down with the Earl of Home."

Another was precentor at the Kirk, and besides leading the psalmody on Sunday, taught the lads and lasses of the neighborhood dancing on week days, in the winter time, when out-of-door labor was scarce.

Among the rest was a tall, straight old fellow, with a healthful complexion and silver hair, and a small round crowned hat. He had been about to shoulder a hod, but paused, and still looking at Scott, with a slight sparkling of his blue eyes, as if waiting his turn; for the old fellow knew himself to be a favorite.

Scott accosted him in an affable tone, and asked for a pinch of snuff. The old man drew forth a horn snuff box. "Hoot, man," said Scott, "not that old mull: where's the bonny French one that I brought you from Paris?" "Troth, your honor," replied the old fellow, "sic a mull as that is nae for week days."

On leaving the quarry, Scott informed me that when absent at Paris he had purchased several trifling articles as presents for his dependants, and among others the gay snuff box in question, which was so carefully reserved for Sundays, by the veteran. "It was not so much the value of the gift," said he, "that pleased them, as the idea that the laird should think of them when so far away."

The old man in question, I found, was a great favorite with Scott. If I recollect right, he had been a soldier in early life, and his straight erect person, his ruddy yet rugged countenance, his gray hair, and an arch gleam in his blue eye, reminded me of the description of Edie Ochiltree. I find that the old fellow has since been introduced by Wilkie, in his picture of the Scott family.

SCOTT AND HIS DOGS.—Scott continued on, leading the way as usual, and limping up the wizard glen, talking as he went, but as his back was towards me, I could only hear the deep, growing tones of his voice, like the low breathing of an organ, without distinguishing the words, until pausing, and turning his face towards me, I found he was reciting some scrap of border minstrelsy about Thomas the Rhymer. This was continually the case in my ramblings with him about this storied neighborhood. His mind was fraught with the traditional fictions connected with every object around him, and he would breathe it forth as he went, apparently as much for his own gratification as for that of his companion.

"Nor hill nor brook we paced along,
But had its legend or its song."

His voice was deep and sonorous, he spoke with a Scottish accent, and with somewhat of the Northumbrian "burr," which, to my mind, gave a doric strength and simplicity to his elocution. His recitation of poetry was at times magnificent.

I think it was in the course of this ramble that my friend Hamlet, the black greyhound, got into a sad scrape. The dogs were beating about the glens and fields as usual, and had been for some time out of sight; when we heard a barking at some distance to the left. Shortly after we saw some sheep scampering on the hills, with the

dogs after them. Scott applied to his lips the ivory whistle always hanging at his button-hole, and soon called in the culprits, excepting Hamlet.—Hastening up a bank which commanded a view along a fold or hollow of the hills, we beheld the sable prince of Denmark standing by the bleeding body of a sheep. The carcass was still warm, the throat bore marks of the fatal grip, and Hamlet's muzzle was stained with blood. Never was culprit more completely caught in *flagrant delicto*. I supposed the doom of poor Hamlet to be sealed; for no higher offence could be committed by a dog in a country abounding with sheep walks. Scott, however, had a greater value for his dogs than for his sheep. They were his companions and his friends. Hamlet, too, though an irregular impetuous kind of youngster, was evidently a favorite. He would not for some time believe it could be he who had killed the sheep. It must have been some cur of the neighborhood, that had made off on our approach, and left poor Hamlet in the lurch. Proofs however, were too strong, and Hamlet was generally condemned. "Well, well," said Scott, "it's partly my own fault. I had given up coursing for some time past, and the poor dog has had no chance after game to take the fire edge off him. If he was put after a hare occasionally he never would meddle with sheep."

I understood, afterwards, that Scott actually got a pony, and went out now and then coursing with Hamlet, who, in consequence, showed no further inclination for mutton.

THE ORIGINAL OF EDIE OCHILTREE.—A further stroll among the hills brought us to what Scott pronounced the remains of a Roman camp, and as we sat upon a hillock which had once formed a part of the ramparts, he pointed out the traces of the lines and bulwarks, and the praetorium, and showed a knowledge of castrametation, that would not have disgraced the antiquarian Oldbuck himself.—Indeed, various circumstances that I observed about Scott during my visit, concurred to persuade me that many of the antiquarian humors of Monk-barns were taken from his own richly compounded character, and that some of the scenes and personages of that admirable novel were furnished by his immediate neighborhood.

He gave me several anecdotes of a noted pauper named Andrew Gemmells, or Gammel, as it was pronounced, who had once flourished on the banks of the Galla Water, immediately opposite Abbotsford, and whom he had seen, and talked and joked with when a boy; and I instantly recognized the likeness of that mirror of philosophic vagabonds and Nestor of beggars, Edie Ochiltree. I was on the point of pronouncing the name and recognizing the portrait, when I recollected the incognito observed by Scott with respect to the novels, and checked myself; but it was one among many things that tended to convince me of his authorship.

His picture of Andrew Gemmells exactly accorded with that of Edie as to his height, carriage, and soldier-like air, as well as his arch and sarcastic humor. His home, if home he had, was at Gal-lashiel; but he went "daundering" about the country, along the green shaws and beside the burns, and was a kind of walking chronicle throughout the valleys of the Tweed, the Etrick, and the Yarrow; carrying the gossip from house to house, commenting on the inhabitants and their concerns, and never hesitating to give them a dry rub as to any of their faults or follies.

A shrewd beggar like Andrew Gemmells, Scott added, who could sing the old Scotch airs, tell stories and traditions, and gossip away the long winter evenings, was by no means an unwelcome visitor at a lonely manse or cottage. The children would run to welcome him, and place his stool in a warm corner of the ingle nook, and the old folks would receive him as a privileged guest.

As to Andrew, he looked upon them all as a parson does upon his parishioners, and considered the alms he received as much his due as the other does his tythes. I rather think, added Scott, Andrew considered himself more of a gentleman than those who toiled for a living, and that he secretly looked down upon the painstaking peasants that fed and sheltered him.

He had derived his aristocratic notions in some degree from being admitted occasionally to a precarious sociability with some of the small country gentry, who were sometimes in want of company to help while away the time. With these Andrew would now and then play at cards and dice, and he never lacked "siller in pouch" to stake on a game, which he did with a perfect air of a man to whom

money was a matter of little moment, and no one could lose his money with more gentlemanlike coolness.

Among those who occasionally admitted him to this familiarity, was old John Scott of Galla, a man of family, who inhabited his paternal mansion of Torwoodlee. Some distinction of rank however, was still kept up. The laird sat on the inside of the window and the beggar on the outside, and they played cards on the sill.

Andrew now and then told the laird a piece of his mind very freely; especially on one occasion, when he had sold some of his paternal lands to build himself a larger house with the proceeds.—The speech of honest Andrew smacks of the shrewdness of Edie Ochiltree.

"It's a varra weel—it's a varra weel, Torwoodlee," said he; "but who would ha' thought that your father's son would ha' sold two gude estates to build a shaw's (cuckoo's) nest on the side of a hill?"

[From the London Quarterly Review.]

M. Beaumont on the Americans.

M. de Beaumont speaks of himself as having travelled a good deal in England before he visited the United States. Yet in many of his criticisms on their manners and usages, he appears to be quite unconscious that he is spending his ingenuity on circumstances which he might have found in the old country just as well as in the new. The style of female education for example, which he expatiates upon through several chapters, is fundamentally the English one—and we hope no French criticisms will ever induce the Americans to lay it aside in favor of that which M. de Beaumont so sentimentally lauds. If this picture, however, be not grossly overcharged, our descendants have certainly pushed the ancient English plan to a rather hazardous extent, and all our Joe Miller stories about match-making mothers and aunts, and soft-eyed damsels who, nevertheless, keep an eye on the main chance, must fail to convey any adequate notion of the business-like sayings and doings of an American ball room. He says:—

"The women of America have in general cultivated minds, but little imagination, and more of sense than sensibility. The education they receive is entirely different from that which is given to their sisters in France. With us, the young girl remains till the day of her marriage under the entire protection of her parents—she reposes peaceful and unsuspecting, because near her there is a tender solicitude which watches and sleeps not—she has no need to reflect while there is another to think for her; she partakes the occupations and the sentiments of her mother, merry or sad, according as she happens to be at the moment—never beforehand with life, quietly gliding with its natural current. In America, she is free before she is adolescent—with no guide but herself, she treads, as at a venture, paths unknown to her feet. The first steps are the least dangerous—childhood traverses life as a light skiff plays without risk on a sea without rocks. But when the stormy billows of young passions are to be encountered, what is to become of that frail bark, with its swelling sails and inexperienced pilot? The education of America takes precautions against this danger: the fair maiden receives, at a very early period, full information as to the snares she will have to meet. Her instincts would be poor guardians for her; they place her under the protection of her reason: thus enlightened as to the allurements which are to surround her, she goes forth, trusting in herself alone for the means of escape. Her prudence never fails her. But all this deprives her of two qualities charming above every thing else in early youth—candor and simplicity. The young American female has need of knowledge to be virtuous—but she is too knowing to be innocent. This precocious liberty gives a serious turn to all her reflections, and stamps her character with something of the masculine.

"An excessive coquetry is, however, a trait common to all the young American girls, and it is also a consequence of their education. For every one who has passed her sixteenth summer, the one great interest of life is a marriage. In France, she desires it—in America, she seeks for it. In the midst of that all-busy society, where everybody has some positive material object in hand, she too has her concern—her business—her industry: it is to find a husband. The men about her are cold, chained to their worldly affairs—she must go to them—a powerful charm must be called in to attract them. Do not let us be surprised, then, if the

young girl who lives in the midst of them is prodigal of her studied smiles and tender glances: her coquetry is, to be sure, a well considered and prudent thing; she has measured the space within which she may play herself off—she knows the limit which she must not pass. Grant that her artifices are not in themselves to be applauded—you must at least allow that her aim is irreproachable—it is only to be married. Coquetry, with us, is a passion; in America, it is a calculation. Even if the young lady who has formed an engagement continues somewhat of her former procedure, this is a matter not of taste but of foresight. Her lover may break his faith: she is aware of this, and goes on gaining hearts, from the wish, not to have two at a time, but to have a second in reserve in case the first should fail her."—Vol. i. p. 25.

M. de Beaumont, however, if he may be considered as a little too severe on the pretty damsels of the United States, does as ample justice as any other traveller to the undoubted purity of their manners. On this head, indeed, the reports of all the recent witnesses agree most completely—and to us most delightfully, for here again we are proud to say, we recognise the manners of England in those of her descendants. M. de Beaumont speaks, like a Frenchman as he is, about the old societies of Europe, as if they were all as corrupt on this score, as for aught we know the society of Paris may still be—but we need not enlarge upon a blunder which every English reader will at once trace to the right source. He tells us,--

"You may estimate the morality of any population, when you have ascertained that of the women; and one cannot contemplate American society without admiration for the respect which there encircles the tie of marriage. The same sentiment existed to a like degree among no nation of antiquity; and the existing societies of Europe, in their corruption, have not even a conception of such a purity of morals. In America, people are not more severe than elsewhere, as to the disorders and even the debaucheries of single life; one meets with abundance of young men whose manners are notoriously dissolute, and who are thought none the worse of on that account. But society has no toleration for any tampering with conjugal faith; it is as inflexible towards the man who tempts as the woman who yields: both are banished from its bosom—and to meet this stern award it is not even necessary to be guilty; it suffices to have incurred suspicion.

"The morality of the American women, moreover, is protected by other circumstances. The man there, engrossed with positive interests, has neither the time nor the soul for tender sentiments and gallantries: he pays court once in his life—that is when he desires to arrange his marriage. The question then is, not an intrigue, but—a piece of business. He has not leisure to be in love, still less to be amiable. That taste for the fine arts, which blends so well with the enjoyments of the heart, is forbidden to him. To be suspected of any passion for Mozart or Michael Angelo would destroy him in public opinion. Condemned by the manners of his country to shut himself up within the dry circle of utility, the young American is equally devoid of the wish to please women and of the capacity to seduce them."—Vol. i. p. 39.

In a note on this passage he thus qualifies one of his statements:—

"It is true that one may meet here and there by accident with a young man whom the chances of a hereditary fortune and a polished education have qualified to take part in the intrigues and gallantries of society—but their number is so small that they can do no harm; and if they show but the slightest symptom of a disposition to trouble the peace of a fireside, the whole American world is at once in league to combat and crush the common enemy. This explains why American bachelors, with fortune and leisure, never remain in the United States, but come to live in Europe, where they find intellectual men and corrupt women."—Vol. i., p. 349.

The majority of his European readers will hardly thank our author for this last sentence. American 'bachelors with fortune and leisure' pass rapidly through England—but we never heard of any such '*raw isis*' establishing his European roost elsewhere than at Paris, Brussels, Rome, or Naples.

We are sorry to say that our next extract must be one of a less agreeable description. It refers to that popular indulgence for unfair bankrupts, which has already been adverted to in the discussion about M. Ludovic's proposed marriage with

Miss Mary Nelson of Baltimore. M. de Beaumont says, in one of his notes—

"I don't know if there exists anywhere so much commercial prosperity as in the United States—yet among no people on the face of the earth are there so many bankruptcies. The commerce of these States is placed under the most favorable circumstances that can be conceived—an immense and fertile soil, gigantic rivers, numerous and well-placed harbors—a people enterprising, calculating, with a natural genius for maritime life—all these conspire to make this a nation of merchants, and to crown its industry with riches. But for the very reason that success is so probable, men pursue it with an unbridled ardor: the spectacle of rapid fortunes intoxicates the observers, and they rush blindfold to their aim—hence ruin. Shortly after my arrival in America, as I was entering an apartment in which the *élite* of the society of one of the principal cities in the Union were assembled, a Frenchman, an old resident in the country, said to me, 'Above all things speak no ill of bankrupts.' I did well to follow his advice, for among all the rich personages to whom I was presented, not one but had failed at least once in the earlier part of his career.

"All the Americans being engaged in business, and most of them having more or less frequently failed, it follows that to be a bankrupt is a nothing. An offence of which so many are guilty ceases to be one. The indulgence for bankrupts springs, then, from the commonness of the misfortune; but its principal cause is the facility with which men there rise from such a fall. If the bankrupt were lost forever, he would be abandoned to his misery; people are more lenient when they know that he will recover himself. This is not a very generous feeling, but it is in human nature.

"It is now easy to understand why there is no law to punish bankruptcy in these States. Electors and legislators all are alike traders and subject to a failure; they have no wish to punish an universal sin. Such a law, moreover, were it made, would remain inoperative: the people, which make the law by its mandates, executes or refuses to execute them in its tribunals, where it is represented by the jury. In this condition of things, nothing protects American commerce against fraud. No trader is compelled to keep any sort of book or register. There is, in short, no legal distinction between the merchant who yields to real misfortune, and him whose bankruptcy has been the fruit of extravagance, dissipation, and fraudulence."—Vol. i. p. 363.

CURIOUS ASTRONOMICAL THEORY.—We state the following on the authority of M. Arago, the eminent French Astronomer:—If we place in a horizontal line a series of figures of which the law is evident (each double the preceding)—

0 3 6 12 24 48 96 192
and afterwards add 4 to each, we shall have a series denoting the relative distances of the Planets from the Sun: thus—
4 7 10 16 28 52 100 196
Mer. Venus, Earth, Mars, Jupiter, Saturn, Uranus.
If 10 represents the distance of the Earth, 4 will be that of Mercury, 7 Venus, 16 Mars, and 52, 100, and 196 the respective distances of Jupiter, Saturn, and Uranus. This law was known as far as 100, before the discovery of Uranus; and the distance of that planet being found to correspond, affords a very remarkable confirmation of its truth. But it will be observed there will be a deficiency of one term between Mars and Jupiter, and nearly at the proportional distance of 28 from the Sun. This planet was named Ceres; and since, three others have been found—Pallas, Juno, and Vesta—all of which have their orbits so near to each other, as to lead astronomers to believe that they are fragments of a larger planet which had been shattered into pieces by some internal explosion, or the shock of a comet.

MODE OF PRESERVING MILK FOR LONG VOYAGES.—Provide a quantity of pint or quart bottles, (new ones are perhaps the best;) they must be perfectly sweet and clean, and very dry before they are made use of. Instead of drawing the milk from the cow into the pail as usual, it is to be milked into the bottles. As soon as any of them are filled sufficiently, they should be immediately well corked with the very best cork, in order to keep out the external air, and fastened tight with pack thread or wire, as the corks in bottles which contain cider generally are. Then on the bottom of an iron or copper boiler spread a little straw; on that

lay a row of the bottles filled with milk, with some straw between each to prevent them from breaking, and soon alternately, until the boiler has a sufficient quantity in; then fill it up with cold water. Heat the water gradually until it begins to boil, and as soon as that is perceivable draw the fire. The bottles must remain undisturbed in the boiler until they are quite cool. Then take them out, and afterwards pack them in hampers, either with straw or saw dust, and stow them in the coolest part of the ship. Milk preserved in this way has been taken to the West Indies and back, and at the end of that time was as sweet as when drawn from the cow.—[London paper.]

[From the Baltimore American.]

CULTURE OF TEA.—We find in the last number of the Westminster Review the fullest and most interesting account. We have ever met with of the nature and culture of tea, a commodity which forms the chief bond of connexion between the empire of China with its population of three hundred and fifty millions, and the rest of the world.

The tea plant is a bushy evergreen shrub, which if permitted to attain its natural size will grow to the height of twelve feet. In botany it constitutes by itself a distinct genus, of which there is but a single species, the plants yielding the different kinds of black and green teas being in reality no more than permanent varieties, the result of long culture. The plant has been cultivated in China from time immemorial. The latitudes in which it thrives best are from 23 to 30 north. Like the vine it is cultivated on the sides of hills in preference to plains. It is raised from the seed, and yields its first crop in from two to three years. When the best teas are raised, the plant is carefully pruned and prevented from attaining a height exceeding two or three feet. The production of good tea depends upon soil, locality and season, fully as much as that of good wine; like it, too, the produce varies according to the care with which the crop is collected and prepared for use. From the same plant are commonly taken in each season four crops, which is another cause of variety in tea as it appears in the market. The younger the leaves the higher is the flavor. The earliest crop is taken in the beginning of Spring, and the last in August.

The growth of teas of sufficiently high flavor to keep for a considerable time, and fit in consequence for exportation, was for a long time confined to two Provinces—Fokien, which yielded black tea, and Kiangnan, which yielded green tea. Of late years, owing to the great demand for teas in Europe and America, the culture has been extended to three additional provinces. The two original provinces, however, produce the best: the worst comes from the district of Woping in Canton.

In China, contrary to the usage of the other great despotisms of Asia, the soil is private property, and is very minutely subdivided. The leaves of the tea plant are picked by the cultivator's family, and conveyed at once in a fresh state to the market, where they are purchased by a particular class of dealers, who dry them under a shed, and in this imperfect state of preparation dispose of them to a second and higher class of traders, who sort the teas according to their qualities, and after completing the process of manufacture, pack them in chests. The tea arrives in Canton about the middle of October, and the busiest period of the trade exists from that time to the end of December. The traders in green tea amount in number to about four hundred; the dealers in black are less numerous but more wealthy. They accompany their chests, carried mostly by porters from distances of several hundred miles to Canton. In Canton the sorts quoted for export do not exceed fifteen in number, about eight of which are black and six green, the prices varying from twelve to sixty cents a pound.

In regard to the consumption of tea in different countries, the writer remarks that all the nations of Asia east of Siam and Cambodia are what may be termed habitual and immemorial consumers of tea. With the Chinese themselves the tea-pot is in constant requisition, from morning till night, with persons of both sexes, of all ages, and all conditions. They use it always without milk, and frequently without sugar. Supposing—that is a very reasonable supposition—that each inhabitant on an average drinks twice as much as each inhabitant of Great Britain, the annual consumption in China would be half a million of tons.

The use of tea in Europe commenced about

one hundred and eighty-five years ago, and in this time the consumption has raised from a nameless fraction to nearly thirty thousand tons. A greater quantity is consumed in Great Britain than in all the rest of Europe and America. As to the question whether China will be able to supply any great quantity in proportion to the increased demand, the writer in the Westminster thinks there is no doubt but it will. The culture which was extended from two to five provinces, to meet European demand, can be extended to many others. The land in which tea is cultivated consists of hills and mountains of no remarkable fertility, and not suited for the production of corn. Of these, notwithstanding the highly cultivated state of the plains and valleys of China, there is much unoccupied.

The effects of tea upon the human frame are those of a very gentle stimulant, producing an exhilaration of spirits. It is to this alone that it owes its general adoption. The diversity in the flavor of the different varieties, is probably fully as great as in the different varieties of wine. The Chinese themselves, and the oriental nations generally, hardly consume any thing but black tea. The English consume one part of green to four parts of black. The Americans, on the contrary, consume two parts of green to one of black.

June 8th.

DEAR MR. EDITOR.—I propose sending you from time to time, scraps, (of which the present is a sample,) if you find them to your taste. I give your journal "the preference," as a vehicle for publicity, from a natural penchant, for a place that we have visited and where we have been well treated; having had the honor, about a year ago, of appearing in your columns in the shape of some lines addressed to a fat militia Colonel. W.

[FOR THE NEW YORK AMERICAN.]

Musings.—By Flaccus, in the Country.

"When my mirth ceases to be instructive, it shall never cease to be innocent."—[ADDISON.]

Once more upon the hills, rejoiced and free—
Dear nature! welcome is thy face to me—

Welcome thy woods and streams—my heart is sick
Of paths of stone, and avenues of brick;

Of muddy brooks that course no leafy bowers,
Whose scents, oh! Nature, breathe not of thy flowers—

Jarred with the din of Commerce, and the strife
Of man with man for pelf, or very life.

To this green spot for refuge do I flee—
My chains are snapt and I again am free—

Farewell ye streets! where lime dust clouds the air,
I quit with smiles what cost me many a tear—

Ye docks farewell! nor wonder that I run,
What's in bad odour 'tis the thing to shun—

Estates! no more I watch your fall or rise,
"There is no speculation in these eyes."

Break, all ye banks!—I heed not how ye go,
Save me but this, whereon the violet blow.

Welcome! ye bugs, wasps, humble-bees and flies!
Mosquitoes! pipe your dulcet melodies!

Buzz, an! and sting;—ye are not so unkind!
As the vile insects I have left behind—

The fox, the cat, the politician, thief,
Turn bugs to joys, and make their bite relief.

Ye bull-frogs, shout! for sweeter is your war
Than such as abolition *creaks* and *car*—

Come, climb the hills, ye jaded spirits, come!
Whom fame, or thirst, have bound so long at home—

The sight of woods, the breath of flowery plains,
Will kindle youth again within your veins!

Merchants! a truce to traffic—"take the gods
The Gods provide ye" in the fields and woods.

Ye doctors! here's the physic for the blood;
Oh! leave your patients for your mutual good—

A little while, come breathe these genial airs,
'Twill aid your own health, and establish theirs—

Ye nimble lawyers, leap these brooks and fences,
And leave your causes to their consequences—

Ye editors!—ah no—I lost ye quite,
Remain, to give these musings to the light—

Brokers of Wall-street! Babel of the town,
Come mount the hills, and let the stocks go down—

Agrarians!—stay—my muse is out this time,
For they who grovel are unfit to climb.

Place me upon some green and breezy height,
With the mad town, though distant, yet in sight;

Where I can see her face, avoid her din,
Enjoy her charms, and shun the fifth within.

Here let me sit, to soothing thoughts resigned,
And muse on all the follies left behind—

My page will prove more pleasant than profound,
I love to tickle, rather than to wound;

When fools are sunk in dullness' slumber low,
A feather wakes as quickly as a blow.

In satire's shaft, my pen will not assume
The part of barb, but only that of plume.

No. 1.

W.

We are glad to see this marked No. 1, and shall await, with eagerness, that what is so cleverly begun, shall be unfailingly continued.—[Ed. N. Y. American.]

RAILROAD JOURNAL AND ADVOCATE OF INTERNAL IMPROVEMENTS.

This work is published once a week, in quarto form of eight pages, devoted mainly to the subject of internal improvements, in all its various modes and forms. Three volumes were completed in December, 1834, and the 4th volume is now in progress.

Terms, \$3 a year, IN ADVANCE. Previous volumes same price; full set of four volumes, \$12.

RAILROAD AND CANAL MAP.

Or a Map of the United States, 24 by 40 inches, on which is delineated all the Railroads and Canals in use, or in course of construction, and most of those in contemplation; together with a concise description of, or reference to, each, and containing over 70 pages of letter press. The map is on bank note paper, and put up in pocket form, with morocco cover, or in paper cover, and may be sent by mail to any part of the country. Price \$2.

MECHANICS' MAGAZINE, AND REGISTER OF INVENTIONS AND IMPROVEMENTS.

This work has nearly completed five volumes. It is published monthly, in numbers of 64 pages each, in large octavo form, and forms two good sized volumes a year, of 384 pages each.

This work is STEREOTYPED from the first number, and therefore any number of copies may be obtained from commencement, if desired. It has many able correspondents, who furnish original communications, in addition to its selections from the best European periodicals of the day, with numerous engravings and illustrations of the subjects on which it treats. The Mechanics' Magazine may be considered as one of the permanent periodicals of the country. Price, \$3 per annum, IN ADVANCE. Previous volumes \$1.50 each.

THE APPRENTICE'S COMPANION—

A monthly publication, in large octavo form, of sixteen pages each number—designed to persuade APPRENTICES, and others, to habits of INDUSTRY, TEMPERANCE, and FRUGALITY—is published at the office of the MECHANICS' MAGAZINE, No. 35 Wall street, New-York, for FIFTY CENTS a year—for 12 numbers—by D. K. MINOR.

All letters must be postage paid. Eleven numbers sent to one address for \$5,—and TWENTY-THREE for \$10. D. K. M.

NEW-YORK FARMER AND AMERICAN GARDENER'S MAGAZINE.

This work is devoted mainly to AGRICULTURE and HORTICULTURE; it, however, treats upon various other subjects more or less connected with them. It is now in its 8th volume, or 3d volume, new series, and is designed to be made equal to any work of the kind in this or any other country. No reasonable expense will be spared, either to secure the best writers the country affords, or to furnish engravings and illustrations. It is published monthly in large octavo, 32 pages per month, at \$3 per annum, and when paid in advance eight additional pages per month are given. Vols. 6 and 7, or 1 and 2, new series, \$3 per volume.

QUARTERLY JOURNAL OF AGRICULTURE, MECHANICS, AND MANUFACTURES.

This work is composed of the choicest articles of the three preceding works; its character may therefore be understood by reading those advertisements. It has been published at \$5, but will be, hereafter, at \$4 per annum—always in advance; each quarterly number to contain about 220 pages.

These works may all, or either of them, be had of S. Hlydenburgh, 96 North Pearl street, Albany; D. Hale, 124 Washington street, Boston; Fessenden, Philadelphia; or of the Proprietor and Publisher, D. K. MINOR, 35 Wall street, New-York.

PATENT RAILROAD, SHIP AND BOAT SPIKES.

The Troy Iron and Nail Factory keeps constantly for sale a very extensive assortment of Wrought Spikes and Nails, from 3 to 10 inches, manufactured by the subscriber's Patent Machinery, which after five years successful operation and now almost universal use in the United States (as well as England, where the subscriber obtained a Patent,) are found superior to any ever offered in market.

Railroad Companies may be supplied with Spikes having countersink heads suitable to the holes in iron rails, to any amount and on short notice. Almost all the Railroads now in progress in the United States are fastened with Spikes made at the above named factory—for which purpose they are found invaluable, as their adhesion is more than double any common spikes made by the hammer.

All orders directed to the Agent, Troy, N. Y., will be punctually attended to.

HENRY BURDEN, Agent.

Troy, N. Y. July, 1831.

Spikes are kept for sale, at factory prices, by I. & J. Townsend, Albany, and the principal Iron Merchants in Albany and Troy; J. I. Brower, 223 Water street, New-York; A. M. Jones, Philadelphia; T. Janviers, Baltimore; Degrand & Smith, Boston.

F. S.—Railroad Companies would do well to forward their orders as early as practicable, as the subscriber is desirous of extending the manufacturing so as to keep pace with the daily increasing demand for his Spikes.

142am

H. BURDEN.

PARTNER WANTED.

Wanted, a partner in an extensive Printing Establishment. No one need apply who is not a thoroughbred printer, competent to superintend and direct an office in which upwards of 30 persons are employed, and able to furnish \$3000 cash capital. The best of references will be given and required. Letters, with real name, may be addressed to P. P. Post Office, New-York, postage paid, and they will be promptly attended to. May-11

TO TUNNEL MINERS, DRILLERS, &c.

Wanted, immediately, 40 Tunnel Miners, (Cornish Miners will be preferred,) 80 Drillers, 50 Laborers, and two experienced Mine Blacksmiths, on the New York and Harlem Railroad, about five miles from the City. Liberal wages will be given, and cash payments made every fortnight. Apply at Mr. FOWLER'S, St. John's Hall, Frankfort street, New-York.

JOHN RUTTER, Contractor.

The Albany Argus, Philadelphia U. S. Gazette and Pennsylvania, will please copy this, and send their bills to the Railroad Company, 14 Wall street, New-York. 23-11

BLOSSBURG AND PAINTED POST RAILROAD, OR TIoga NAVIGATION COMPANY.

By an Act of the Legislature of the State of Pennsylvania, passed the 14th day of April, 1835, five per cent. interest is guaranteed to the Stockholders of said Company for the term of twenty years.

The books for subscription of the above Stock will be opened at the Exchange in the City of New-York, on Monday, the 22d day of June inst., where one or more of the Commissioners duly authorized will attend.

SAMUEL W. MORRIS,

URIAH SPENCER,

ELIJAH WELSH,

HIRAM BEEBE,

CURTIS PARKHURST,

THOS. DYER,

IRA KILBURN,

THOS. PUTNAM,

WM. WILLARD, Jr.

ASA MANN,

JOHN KNOX,

ROBERT TUBS,

June 6, 1835—21

Commissioners.

PUBLIC NOTICE.

THE undersigned, Commissioners for the amelioration of the navigation of the Richelieu or Chambly River, will receive at their office, in the borough of St. Denis, until the 15th of June next, sealed propositions for the construction or erection of a Dam or Chaussée, with a Lock; to be erected about three miles above the village of St. Ours, either in Cut Stones, Common Stones, *Pierres Brutes*, or in Wood, according to the plans and specifications made by W. R. Hopkins, Esq., Engineer, deposited, and where they can be seen at any time, in the hands of Joseph Cartier, Esq., one of the said Commissioners, at St. Antoine.

All propositions addressed by the mail must be sent free of postage.

Two good securities will be required for the due execution of the aforesaid works.

Further information can be had at any time, from the undersigned, in addressing them at their respective residences, or from the said W. R. Hopkins, Esq., at Bunker's Hotel, at the Chambly Basin.

ROCH DE ST. OURS, at St. Ours.

JOSEPH CARTIER, at St. Antoine.

JOS. T. DROLET, at St. Marc.

LS. C. DUVERT, at St. Charles.

L. F. DESCHAMBAULT, at St. Denis.

Office of the Commissioners, } 20-4t
St. Denis, May 11, 1835.

The above Dam and Lock are in dimensions as follows: Lock 280 feet, Chamber 50 feet wide; Dam 675 feet long, 8 feet high.

RAILROAD CASTINGS.

MANY & WARD, Proprietors of the Albany Eagle Air Furnace and Machine Shop, will make to order car wheels, chairs and knees, and every other description of castings required for railroads. R-1y feb14

STEPHENSON.

Builder of a superior style of Passenger Cars for Railroad, No. 204 Elizabeth street, near Bleeker street, New-York.

RAILROAD COMPANIES would do well to examine these Cars; a specimen of which may be seen on that part of the New-York and Harlem Railroad now in operation. J36 11

NOTICE TO MANUFACTURERS.

SIMON FAIRMAN, of the village of Lansingburgh, in the county of Rensselaer, and state of New-York, has invented and put in operation a Machine for making Wrought Nails with square points. This machine will make about sixty dd nails, and about forty 10d nails in a minute, and in the same proportion larger sizes, even to spikes for ships. The nails are hammered and comes from the machine completely heated to redness, that its capacity for being clenched is good and sure. One horse power is sufficient to drive one machine, and may easily be applied where such power for driving machinery is in operation. Said Fairman will make, vend and warrant machines as above, to any persons who may apply for them as soon as they may be made, and on the most reasonable terms. He also desires to sell one half of his patent right for the use of said machines throughout the United States. Any person desiring further information, or to purchase, will please to call at the machine shop of Mr. John Humphrey, in the village of Lansingburgh. August 13, 1833. A29 MF & R11

RAILROAD CAR WHEELS AND BOXES, AND OTHER RAILROAD CASTINGS.

Also, AXLES furnished and fitted to wheels complete at the Jefferson Cotton and Wool Machine Factory and Foundry, Paterson, N. J. All orders addressed to the subscribers at Paterson, or 60 Wall street, New-York, will be promptly attended to. Also, CAR SPRINGS. Also, Flange Tires turned complete. J8 ROGERS, KETCHUM & GROSVENOR

PATENT HAMMERED SHIP, BOAT, AND RAILROAD SPIKES.

Railroad Spikes of every description required, made at the Albany Spike Factory.

Spikes made at the above Factory are recommended to be public as superior to any thing of the kind now in use. Ship and Boat Spikes made full size under the head, no as not to admit water.

Orders may be addressed to Messrs. ERASTUS CORNING & CO., Albany, or to THOMAS TURNER, at the Factory, Troy, N. Y. sept.13 1v

RAILWAY IRON.

93 tons of 1 inch by 1 inch,	Flat Bars in lengths o
200 do. 1 1/2 do. do.	14 to 15 feet, counter sunk
40 do. 1 1/2 do. do.	do. holes, ends cut at an angle
800 do. 2 do. do.	of 45 degrees, with epi-
800 do. 2 1/2 do. do.	ling plates and nails to
	soon expected.

250 do. of Edge Rails of 36 lbs. per yard, with the requisite chairs, keys and pins.

Wrought Iron Rims of 30, 33, and 36 inches diameter for Wheels of Railway Cars, and of 60 inches diameter for Locomotive wheels.

Axles of 2 1/2, 3, 3 1/2, 3 3/4, and 4 inches diameter for Railway Cars and Locomotives of patent iron.

The above will be sold free of duty, to State Governments and Incorporated Governments, and the Drawback taken in part payment. A. & G. RALSTON.

9 South Front street, Philadelphia.

Models and samples of all the different kinds of Rails, Chairs, Pins, Wedges, Spikes, and Splicing Plates, in use both in this country and Great Britain, will be exhibited to those disposed to examine them. d11meowr

SURVEYORS' INSTRUMENTS.

Compasses of various sizes and of superior quality warranted.

Leveling Instruments, large and small sizes, with high magnifying powers with glasses made by Troughton, together with a large assortment of Engineering Instruments, manufactured and sold by

E. & G. W. BLUNT, 154 Water street, corner of Maiden lane. J31 6t

SURVEYING AND ENGINEERING INSTRUMENTS.

The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely new, among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also a Railroad Goniometer, with two Telescopes—and a Leveling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes. WM. J. YOUNG,

Mathematical Instrument Maker,

No. 9 Dock st., Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested. Baltimore, 1832.

In reply to thy inquiries respecting the instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad, I cheerfully furnish thee the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other description of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sight, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to lateral angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,

JAMES P. STABLER, Sup't of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1833.

Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors.

E. H. GILL, Civil Engineer.

Germantown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY R. CAMPBELL, Eng. Philad. Germantown, and Norrist. Railroad

ml 1y